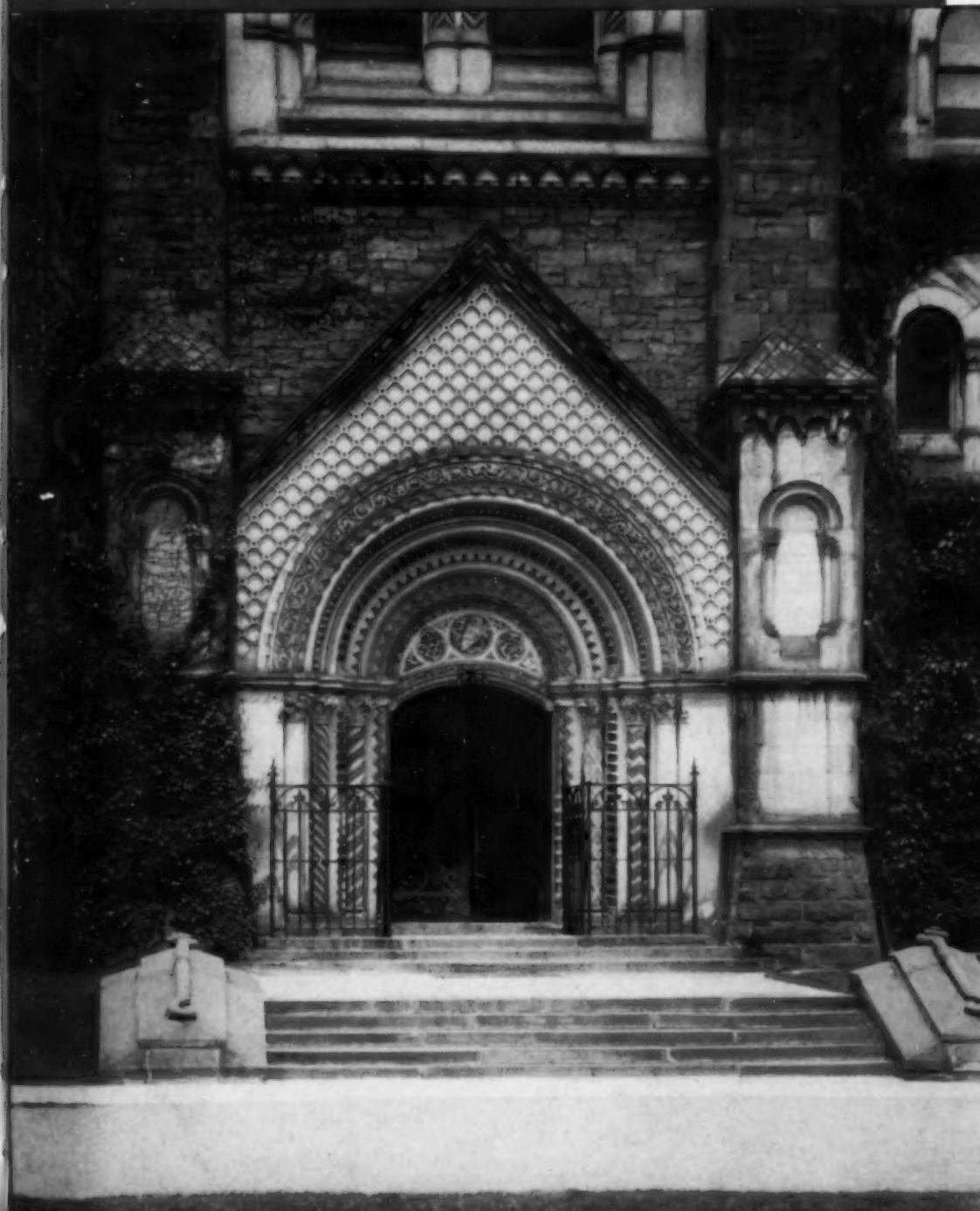


CANADIAN GEOGRAPHICAL JOURNAL

DECEMBER
1938

VOL. XVII
NO. 6



35c A COPY

\$3.00 A YEAR

Bermuda

PLEASURE ISLAND



So near to Home So far from Winter

Here's a cleaner greener land where no frost comes to kill the flowers . . . where you golf year round . . . and swim in surf luminous with the loveliest rainbow hues.

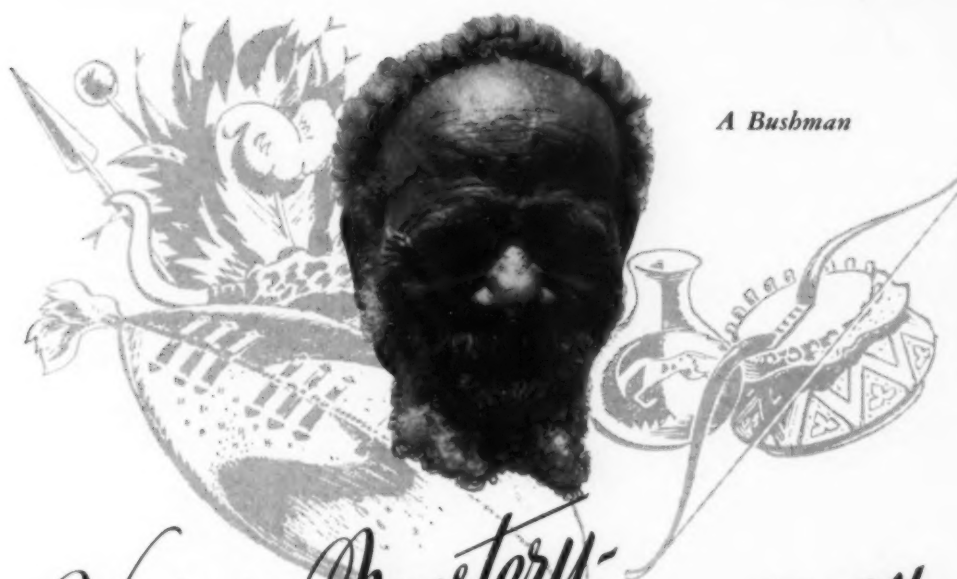
This little corner of the British Empire is just the spot for you . . . utterly summery and thoroughly delightful . . . and yet it requires such a brief time in the air or on the sea to deposit you in Bermuda.

"YOU CAN GO BY SEA OR BY AIR"

● Luxury liners travel from New York to Bermuda in 40 hours . . . a round-trip total of nearly four days of delightful shipboard life. Sailings from Halifax or Boston allow for a slightly longer time at sea. ● Splendid new transatlantic planes now take off from Port Washington, New York and Baltimore, Maryland, and descend at Bermuda five hours later . . . an enchanting experience in the sky.

● A wide choice of accommodations in Bermuda's many hotels and cottages.

FOR BOOKLET: YOUR TRAVEL AGENT OR THE BERMUDA TRADE DEVELOPMENT BOARD, VICTORY BUILDING, TORONTO



A Bushman

Veiled in Mystery- **SOUTH AFRICA** *tempts you*



Drakensberg — "Mountains of the Dragons"

WATCH the mile-wide Zambesi River swing into the tumbling whiteness of Victoria Falls. Scan the peaks and ramparts of the Drakensberg. See the hushed grottos of the Congo Caves.

Among these and a thousand others of her treasures, South Africa has allowed man to place finely appointed railways, splendid motor roads, excellent

hotels . . . all our modern travel comforts. But in yielding this she has yielded nothing. Keeping her dark secrets, her power, her sheer, breath-taking beauty, she tempts you . . . to make it South Africa, this year!

Thrills of the Primitive in Civilized Comfort

*The strength of a bank is
determined by its history, its
policy, its management, and
the extent of its resources.
For 121 years the Bank of
Montreal has been in the fore-
front of Canadian finance.*



From the Steps of the Head Office of the Bank of Montreal.

CANADIAN GEOGRAPHICAL JOURNAL

Editor

Gordon M. Dallyn

172 WELLINGTON STREET, OTTAWA

This magazine is dedicated to the interpretation, in authentic and popular form, with extensive illustration, of geography in its widest sense, first of Canada, then of the rest of the British Commonwealth, and other parts of the world in which Canada has special interest.

Contents

DECEMBER, 1938

VOLUME XVII No. 6

COVER SUBJECT:—Main Entrance, University College, University of Toronto, Toronto, Ont.
Architecturally the finest example of Norman style on the continent.

	PAGE
THE STORY OF CANADIAN ART by DONALD W. BUCHANAN	273
CANADIAN UNIVERSITIES by SIR ROBERT A. FALCONER	295
NORWAY by C. RASMUSSEN and A. GILBERT HALE	313
EDITOR'S NOTE-BOOK	V
AMONGST THE NEW BOOKS	VI

• • • • •

The British standard of spelling is adopted substantially as used by the Dominion Government and taught in most Canadian schools, the precise authority being the Oxford Dictionary as edited in 1936.

Contents of this Journal are copyright.

The Canadian Geographical Journal is printed in Canada by the Canadian Printing and Lithographing Company, Limited, Montreal, for the proprietors, The Canadian Geographical Society, and published by the Society at 2151 Ontario Street East, Montreal, Canada.

Address all communications regarding change of address, non-delivery of Journal, etc., to the publication office, 2151 Ontario Street, East, Montreal, Canada, giving old and new address. On all new memberships, the expiry date will be printed on wrapper containing starting number. This will constitute a receipt for subscription.

Member Audit Bureau of Circulations.

Membership fee is \$3.00 per year in Canada and other parts of the British Empire, which includes delivery of the Journal, postpaid; in United States, Mexico, France, Spain, Central and South America, \$3.50; in other countries, \$4.00. Make membership fee payable at par in Ottawa.

Sole Trade Agents for the British Isles: George Philip & Son, Ltd., 32 Fleet Street, London, E.C. 4.



THE STORY OF CANADIAN ART

by DONALD W. BUCHANAN

OF all the arts in Canada, painting seems nearest to maturity. But if painting is ahead of the others can we not ask why? Perhaps the reason lies deep in our psychology. Are we not, as a nation, obsessed with the magnitude of geography; as a people, are our minds not constantly involved in the problems of space and distance? Nothing more natural then than that we should be attracted firstly and most strongly to the visual arts and in particular to landscape painting.

The exhibition, "A Century of Canadian Art", held at the Tate Gallery in London, England, this autumn, seemed certainly to centre round landscape. Many of the English critics, however, were attracted noticeably by the work of some of our earliest artists, such as Kane and Krieghoff, who took humanity as much as topography for their themes. One can well begin by some mention of these two men. Paul Kane was not a great painter perhaps, but he was one possessed of an original urge to travel and explore. Brought up in the town of York, now Toronto, after some studies abroad, he returned to Canada in 1844 and two years afterwards set out to see the great lone land of the western plains. This journey took him as far north as Fort Edmonton and to the Pacific coast also. The sketches he brought back and the canvases he composed are painstaking documents of an Indian and fur trading era. They are best studied when grouped together as in the Paul Kane collections in the National Gallery, Ottawa, and in the Royal Ontario Museum, Toronto. When you have once viewed them you will want to read the book he wrote, "The Wanderings of an Artist among the Indians of North America". Cornelius Krieghoff, who was painting in Montreal and Quebec until 1864, when he left Canada, is perhaps better known than Kane to-day. He was not a great artist either, but he set a style. By diligent work

and a knack for salesmanship, he persuaded our ancestors that there was all a world of beauty to be found in the familiar scenes of French-Canadian hamlets, of snow bound farmsteads and of ice covered rivers with brilliant red sunsets. Apparently German born, and either Dutch or German taught, Krieghoff had technical qualifications similar to, but no better and no worse than those of many so-called "pioneer" painters in the adjoining states of the American union. It was what he chose to paint that mattered, and above all that he should have interested Canadians in these subjects.

The tradition had been established, but there is a long gap between Krieghoff and our next significant artists, in point of time, Morrice and Cullen. In that wide interval, British North America was turning from colonial dependency to confederation. Hands and brains were busy in the expansion of commerce, the building of railways, the opening of farm and forest lands. In this period of incubation, it would be unfair to expect to find much that was startling or new in painting. True, there were the beginnings of official recognition. In 1872, the Ontario Society of Artists was formed and in 1880 the Marquis of Lorne established the Royal Canadian Academy and in 1882 the National Gallery. But the action of the Governor-General while generous, was perhaps a little premature. A sufficient nucleus of artists of quality, who could have been used to set a distinctive norm through the guidance of an academy, did not yet exist in Canada. A few names like John Fraser are remembered but not many others. As for the National Gallery, it had to be lodged for some years in a building that had the appearance of a renovated stable and its collection was given, some say, second place to an adjoining exhibition of stuffed fish.

Left:—"In a Wood" by Emily Carr.—*Courtesy of the artist.*



"The Rogers Pass"
by John A. Fraser, R.C.A.
(1838-1898)

*Courtesy of The National
Gallery of Canada*

Many of the artists of that day have been severely criticized. They have been called imitators; men obsessed by the fashion, or at least by the collectors' fad of their time, for pale Dutch landscapes. The misty atmospheres of the Netherlands certainly may have crept into some of their reproductions of the Canadian scene. After all, they dared not be otherwise than in the mode; they could barely live by their art as it was. The rich collectors of that era, having for the most part forsaken the tradition established by the buyers of Krieghoff's day, bought European paintings almost exclusively; their choice was the brownish forests and glades of the Barbizon school from France, or the over-cast skies of Weissenbruch, a Dutch artist, who literally appears to have sold as many of his works in Canada as in his native land. The struggling Canadian painters of this generation had everything against them. That a few of them did emerge from the rut, that a few did continue to foster the taste for Canadian landscape as such, is a tribute to their vitality. In Montreal, for example, all through this period there lived one man who, by the tolerance of his instruction, managed to keep alive a certain freedom of vision among the younger students. This was William Brymner, who after seven years of study in Paris, had been called from a sketching tour in the Rocky Mountains to take the post of art director of the classes being formed by the Art Association of Montreal in 1886. He continued to teach there until his retirement in 1921. Brymner

was interested equally in figure composition and landscape. Apparently, he seemed a little radical to some in those days and he was even accused of being influenced by Japanese art. Yet his work looks strangely unexciting now, except when we see such large compositions as those murals of farm scenes on the Island of Orleans which are in the dining room of the Porteous home at Ste. Petronille, P.Q. Clarence Gagnon, Lilius Newton, Emily Coonan, R. S. Hewton, Edwin Holgate, and a score of others of merit, can be numbered among the painters who studied under him.

Shortly after the turn of the century came the first sign of an awakening, of an organized attempt by the better Canadian artists to make the collectors and the public sit up and take notice that a few reputable works of art were being painted by citizens of this country. This was the reason behind the formation in Toronto of the Canadian Arts Club in 1907. It was at first composed of only eight members, Homer Watson, Horatio Walker, Archibald Browne, W. E. Atkinson, James Wilson Morrice, Franklin Brownell and Edmund Morris. Of these, Brownell, who is still living, is an honest craftsman of sound achievement in portraiture and landscape. He seems to have realized his talents most fully in certain cleanly painted, firm but scintillating, compositions done in the West Indies. Two of those recently deceased, Homer Watson and Horatio Walker attained ample fame both at home and abroad during their lifetime. Walker ob-

"A Wreath of Flowers"
by William Brymner,
R.C.A. (1855-1925)

*Courtesy of The National
Gallery of Canada*



tained most of his original instruction in American art schools, while Watson had an opportunity to study in England for a short while. Their first successes garnered, their first patrons acquired, these men were happy thereafter to retire to rural retreats, sacred to them. Here they painted in a dignified, but far from adventuresome, way for the rest of their lives. Watson settled down near the village of Doon in Western Ontario; his canvases depict the lush meadows, the pastoral scenes and the nearby woodlands of the valley of the Grand River. Walker made his home near Ste. Petronille; the subjects favourite to him were the barns, the cattle, and the farmsteads of the Island of Orleans. They had devoted ranks of admirers but they did not, as teachers, directly influence the succeeding generation nor did their own work serve as a point of departure to others, while the ferment of the impressionist movement had little effect upon them.

In France towards the end of the nineteenth century, Monet, Manet, Renoir, Pissarro and others were overturning the authorized tables of art. Through their influence, new colours, new vibrant atmospheres were being brought into the palettes of many painters in western lands. Impressionism, scientifically considered, was the analysis of light. As the prism divides a simple beam into the vagrant colours of the rainbow, so these painters, some of

them, tried consciously to depict in separate broken touches of pure colour the light as it fell on objects. The atmosphere in their canvases became diffused with the radiance of the rainbow. This analysis of light, this search for colour in shadows, this discovery that snow was not white but a patchwork of mauve and pinks and purples, was introduced from France into Canadian art by Maurice Cullen (1866-1934) and James Wilson Morrice (1865-1924). How idle to speculate on which was the more Canadian of these two distinguished painters! Morrice, the son of a rich textile merchant of Montreal, was educated in Toronto but spent most of his mature years in Paris. Cullen, born in Newfoundland, studied in Montreal and France, then returned to Canada and Montreal, where for many years he endured bitter struggles in order to gain a meagre livelihood. Both these men loved to depict similar scenes — Cullen, the St. Lawrence in winter, snow blowing in cloudy gusts, Montreal streets with sleighs and blanketed horses . . . Morrice, country roads and farmhouses or the curved sweep of Mountain Hill in Quebec city, and horses and sleds too. The subjects were similar to those of Krieghoff. The treatment, however, was more personal and the technique was impressionist, especially with Cullen, who sat often in the cold outdoors in order to paint, exactly as he saw it, the light



"Chief Shot in Both Sides" by James Henderson.
Courtesy of The National Gallery of Canada.

"Girl in Dotted Dress" by Emily Coonan.
Courtesy of the artist.



falling from the winter sun on snow or on vapour arising from the partly frozen river. Morrice based his work more on small sketches, which he did on wooden panels, painted with an exquisite delicacy that was all his own. The jewel-like brilliance of these small compositions was alone enough to give him lasting fame. Morrice was more fortunate than Cullen in having the money and the leisure for experiment and travel. He became the most advanced of all Canadian painters, and he was carried into the stream of modern European art. But it would be a shame to regard Morrice as none the less a Canadian for all this. To his European associates, he was always a mysterious nomad, a wanderer from Quebec, who was at his best in the delicate rendering of landscapes in which the skies were often suffused with a peculiar pink and glowing atmosphere which he had been the first, so French critics said, to introduce. But the origins of these pink flushed skies need not have been so obscure, they were merely the tints of the winter horizon in his native Canada.

The flavour of Quebec landscape as Morrice and Cullen depicted it was a subtle inspiration to the younger painters in the early years of this century. There was for example Clarence Gagnon, a French-Canadian, born in Montreal in 1881. He followed at first the same path; his subjects were similar, his work equally impressionist. Gagnon, afterwards in his canvases, placed more emphasis on brightness and clarity of colour. Lately his best accomplishments have been the illustrations for the novel by Louis Hémon on rural Quebec, "Maria Chapdelaine". Besides Gagnon, we find A. Y. Jackson, another Montrealer, studying in Paris for a few years and returning imbued with a faith in French impressionism, as his early canvas "The Edge of the Maple Wood" indicates, but certain also that no subjects could be more valid for his art than the "Ice Bridge over the St. Lawrence" and the "Ferry at Quebec", compositions which Morrice had exhibited in 1908 in the Autumn Salon in Paris.

Elsewhere in Canada the newer men were also in love with the fleeting effects

of atmosphere, while yet searching for objects and stimulus more definitely Canadian. The work of J. E. H. MacDonald, for example, in Toronto was at first, in manner, noticeably derivative as can be seen from one of his best known early pictures, "Tracks and Traffic", a composition of a railway siding in the snow. MacDonald was then a commercial designer with the firm of Grip Limited, Toronto. He and his fellow employees, including Arthur Lismer, F. H. Varley, Frank Carmichael and Tom Thomson, used to forsake the city for the countryside to paint on Sundays and holidays. Tom Thomson, who came originally from near Owen Sound, had wandered as far west as Seattle before returning to Ontario. His trade was the craft of lettering and decorative design. Only in 1911 did his friends apparently persuade him to take the idea of sketching from nature seriously. In 1913 his first canvas "A Northern Lake" was exhibited and sold.

Although he had accepted the impressionist technique, he already was putting a certain crude intensity into his use of it. Canadian nature, as he saw it, demanded a broad and bolder treatment of colour. Soon the tiny strokes were becoming long rectangles of pigment. He was outlining trees and lakes in unmistakably solid patterns. His friends also began to break away from their earlier preoccupations with soft contours and naturalistic renderings of light. Lawren Harris, a Toronto artist, possessed of an income of his own and a tendency to bolster his personal departures in painting with arguments drawn from philosophy and theory (he had studied in Germany) contributed an additional stimulus. Through Harris, the others met A. Y. Jackson, who had been living in Montreal but who now moved to the Ontario city. So various tendencies merged. Finally in 1919 these men who had been associated for so many years formed the Group of Seven. But Thomson was dead; he had been drowned in Canoe Lake in 1917. Yet some of the romance and tragedy connected with the last years of his career, when he had dwelt as a guide in Algonquin

Park, seeped in to give an emotional background to the work of the new Group.

As pioneers, the Group of Seven met with explicit opposition from the defenders of the more traditional painting. A. Y. Jackson and the others therefore took pains, both in print and in lectures and addresses, to explain what they were trying to accomplish. "Our atmosphere" said Jackson in a speech, in which he outlined the origins of the new school, "was clear and sharp, our colours bright — crude, if you will — and on top of this were four changes of scenery such as they never knew in Europe. In summer it was green, raw greens all in a tangle; in autumn it flamed with red and gold; in winter it was wrapped in a blanket of dazzling snow, and in the springtime, it roared with running water and surged with life."

The original members of the Group of Seven were A. Y. Jackson, Arthur Lismer, Frank Carmichael, Frank Johnston, F. H. Varley, Lawren Harris, and J. E. H. MacDonald. Johnston afterwards resigned and his place was taken in 1926 by A. J. Casson. J. E. H. MacDonald, whose sketches were replete with the richest of colours, and whose large canvases, with their expressive sweep and curve of line and lusty riot of pigment, make his best work memorable, died in 1932. Edwin Holgate, a figure painter of Montreal, joined in 1931 and L. L. FitzGerald of Winnipeg in 1932.

To-day we find Harris no longer living in Canada (his compositions when exhibited appear more abstract than ever) while Varley after a long sojourn in British Columbia is now in Ottawa. The work of Varley in recent years is strongly individual. He remains noticeably free from any tendency, such as that possessed by Casson and Carmichael, towards repetition and stylization. Portraiture which he never really forsook at any time has continued to attract him. His associates on the other hand, Holgate excepted, have often been criticized for their disregard, in subject material, of humanity in action.

In 1933 the Group of Seven disbanded and the larger and more representative



"The Ferry, Quebec"
by James Wilson Morrice,
R.C.A. (1865-1924)

*Courtesy of the National
Gallery of Canada.*



"Church at Magnetawan"
by Alfred J. Casson,
A.R.C.A.

Courtesy of the artist.



"Karlukwees, B. C."
(Colour woodcut) *
by W. J. Phillips, R.C.A.

*Courtesy of The National
Gallery of Canada.*



"Vera" by F. H. Varley, A.R.C.A.
Courtesy of the Honourable Vincent Massey.



"Portrait of Sir William Clark" by Lilius Torrance Newton.
Courtesy of Sir William Clark.

Canadian Group of Painters was formed. This included not only the artists mentioned above, but many landscape painters sympathetic in outlook, as Emily Carr of Victoria and Anne Savage of Montreal. There were also some portrait painters of merit, such as R. S. Hewton and Lilius Newton. Miss Carr of recent years has been composing sinuous green shaded, almost mobile, scenes of deep forest and woodland. Anne Savage is a painter who has kept to a more gentle note, with simple broad patterns and perhaps more subdued colours than those used by some of her contemporaries.

This story leaves out much concerning the immediate past. Only the main streams of development have been mentioned. Of Canadian portrait painters, Sir Wyly Grier has received the most recognition. He is the president of the Royal Canadian Academy, which includes now in its membership a few of the men and women who once might have been classified as rebels. That well-known illustrator of Canadian history, Charles Jefferys, should not be forgotten, while from Western Canada, W. J. Phillips of Winnipeg has

been acclaimed widely in many countries for the excellence of his colour prints done from wood blocks. One should note also the Saskatchewan artist, James Henderson, whose heads of Indians form imperishable records of an era in the history of the prairies that is now almost past. Finally in Quebec there died recently Suzer-Côté, perhaps the Canadian artist who remained most thoroughly in the impressionist tradition.

In retrospect, one may say that the members of the Group of Seven, were impelled by a strong and ever conscious impulse; they were imbued with a moral purpose almost, their object the depiction, in bald, simple outlines, of Canadian landscape as they felt Canadians should see and understand it. This expressed purpose was their manifesto, and it was a manifesto of nationalism.

What they accomplished stands out as a landmark in our art history. Irresistibly in their wake there surged many a younger painter, who sought to follow, to the letter, the wording of the proclamation. But no one, surely least these men of the Group themselves wished Canadian



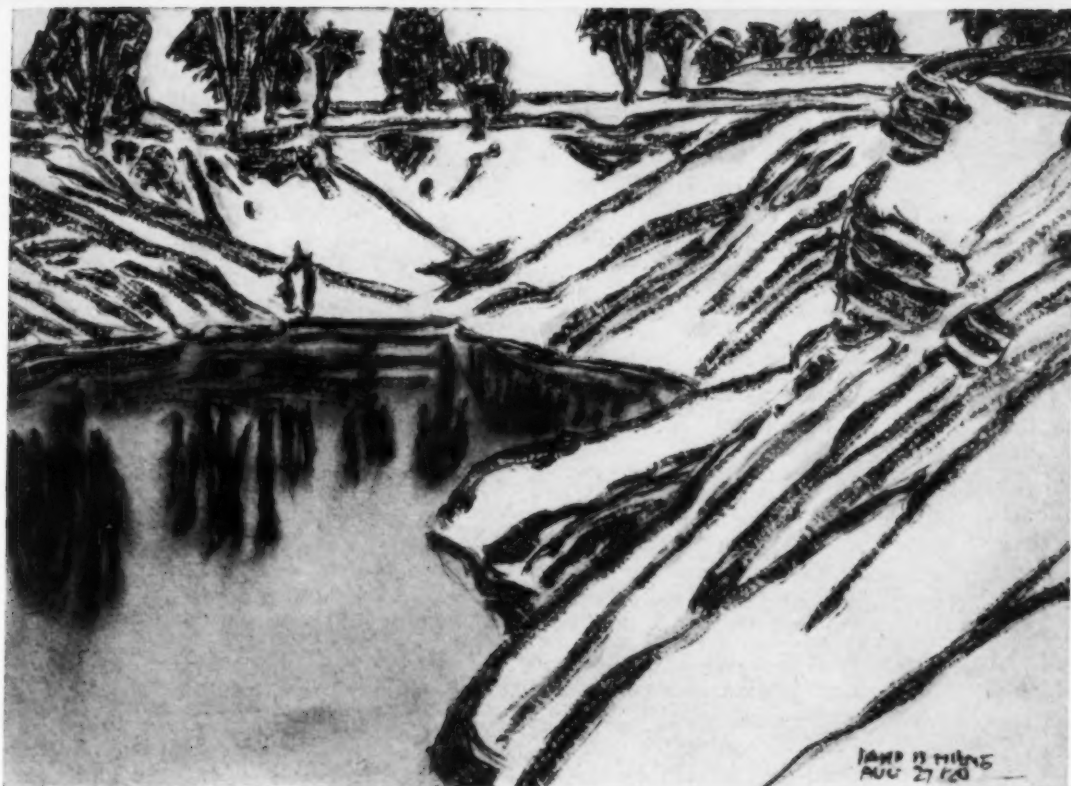
"Jar" by L. Lemoine
FitzGerald.

Courtesy of the artist.



"Landscape, Hochelaga"
(water colour)
by Marc A. Fortin.

*Courtesy of The National Gallery
of Canada.*



"The Pool, Contours" by David B. Milne

Courtesy of The National Gallery of Canada.



"School in a Garden"
by Pegi Nicol.

Courtesy of the artist.

painting to settle down into a sort of landscape routine, symbolizing nationalism. Settle down fortunately it has not, although there has been an inclination for many to imitate the superficial patterns and to disregard the original purpose behind the work of men like Jackson, Harris and MacDonald. To-day this sterile tendency is being counteracted by new and varied stirrings among individual painters, who have taken some of that vigorous idealism which was projected by the Group of Seven and with it have distilled a little wisdom of their own garnered from the subtleties of expression and the experimental freedom of modern art movements in general. Jack Humphrey in St. John, Jori Smith and Marc Fortin in Montreal, David Milne in Muskoka, Carl Schaeffer in Toronto, Pegi Nicol who came originally from Ottawa, Emily Carr, whom we have already mentioned, from Victoria, are some, to name only a few from widely dispersed localities.

Much Canadian painting, one must now admit here in conclusion, has been the product of Sunday or holiday moments of leisure. Many of our painters, in order to earn an adequate livelihood, are employed throughout the week in commercial firms, in designing posters and advertisements, or in teaching in art schools and privately. A few of the portrait painters obtain enough from commissions to live mainly from that income; but the landscape artists, by and large, are less fortunate. In the past a few men, like Morrice and Harris, have had private fortunes that helped them surmount the stile of economic restriction. Others such as Horatio Walker were able to build up, to a certain extent, a market for their works in other countries than Canada. Yet the humiliating struggles of some, like Cullen, to remain independent form a sad story on which to look back. It is true that Canadian collectors are to-day learning to buy more and more the creative

offerings of their own compatriots. That is as it should be. But from city to city, in proportion to our wealth and population, the number of men and women who love and acquire paintings, who buy at least one a year is still remarkably small. So we come to the problem of the artist and the community. Undaunted by the obvious possibility that most of them can only obtain the rare windfall now and then from the sale of a canvas, our painters nevertheless persist in putting brush to canvas. Yet while adversity cannot crush, it is more often in an era, when patronage smiles, that art truly flourishes. One need only note the release of new energy that came to those Canadian painters, who some years ago, were commissioned by one of our transportation companies to spend a summer in the Skeena River valley and elsewhere in Northern British Columbia, there to paint the landscape and the native life of the Indians as they saw it. There has not been enough such sponsorship of talent in this country. The creation of a picture loan society in Toronto, however, indicates a step towards a solution in another direction. Under this scheme a family of moderate means may rent canvases by the month or the year, and turn the rental fee, if they wish, into the ultimate purchase of a painting. As far as our public institutions are concerned, it is only fair to state that our legations in Paris and elsewhere are purchasing contemporary Canadian art, although our other government departments lag in this respect (here we can learn much from the United States and France, for in those nations no new post office is complete without a mural design or a large canvas on its walls). One last word. The tendency to purchase and admire the works of Canadian painters can be and should be encouraged. Let it grow. Then to the story of Canadian art may be added the captions of Canadian pride.



WINTER LANDSCAPE

CORNELIUS KRIEGHOFF, 1812-1872
Courtesy of The National Gallery of Canada



WHITE MUD PORTAGE, WINNIPEG RIVER

PAUL KANE, 1810-1883
Courtesy of The National Gallery of Canada.



OXEN DRINKING



THE FLOOD GATE

HOMER RANSFORD WATSON, R.C.A., 1855-1936
Courtesy of The National Gallery of Canada.



STREET SCENE, QUEBEC, AT NIGHT

CLARENCE A. GAGNON, R.C.A.
Courtesy of The National Gallery of Canada.



THE BEACH, ST. MALO

JAMES WILSON MORRICE, R.C.A., 1865-1924

Courtesy of Mellors Fine Arts



ICE HARVEST

MAURICE G. CULLEN, R.C.A., 1866-1934

Courtesy of The National Gallery of Canada.



THE BEACH, ST. KITT'S

FRANKLIN BROWNELL, R.C.A.

*Courtesy of
The National
Gallery
of Canada.*



*Courtesy of
The Art Gallery
of Toronto.*

BATEAUX

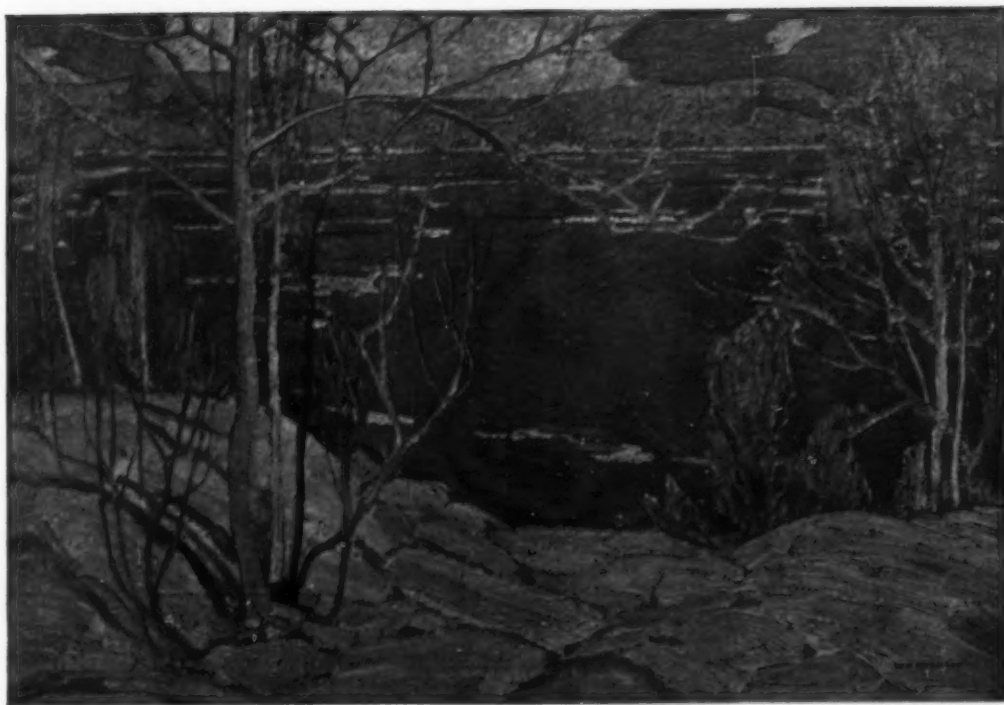
TOM THOMSON, 1877-1917



*Courtesy of
R. A. Laidlaw,
Esq.*

MOUNTAIN STREAM AND SNOW

J. E. N. MACDONALD, R.C.A., 1873-1932



SPRING ICE

TOM THOMSON, 1877-1917
Courtesy of The National Gallery of Canada.



NORTHLAND—HILL TOP

J. E. H. MACDONALD, R.C.A., 1873-1932
Courtesy of H. S. Southam, Esq.



*Courtesy of
The National
Gallery
of Canada*

EDGE OF THE MAPLE WOOD

A. Y. JACKSON



*Courtesy of
H. S. Southam,
Esq.*

GREY DAY, LAURENTIANS

A. Y. JACKSON

*Courtesy of
The National
Gallery
of Canada.*



STORMY WEATHER, GEORGIAN BAY

F. HORSMAN VARLEY, A.R.C.A.



SEPTEMBER GALE

ARTHUR LISMER, A.R.C.A.

*Courtesy of
The National
Gallery
of Canada.*



*Courtesy of
The National
Gallery
of Canada.*

SNOW II

LAWREN S. HARRIS



*Courtesy of
The Art Gallery
of Toronto.*

COUNTRY NORTH OF LAKE SUPERIOR

LAWREN S. HARRIS



*Courtesy of
Canadian
National
Railway*

TOTEM POLES OF GIT-SEGYUKLA

EDWIN H. HOLGATE, R.C.A.



*Courtesy of
Canadian
National
Railway*

WHERE THE NATIVE 'PARADISE LOST'
OF TEMPLAHAM USED TO STAND

ANNE D. SAVAGE



PORTRAIT OF MRS. VINCENT MASSEY

RANDOLPH S. HEWTON, R.C.A.
Courtesy of Hon. Vincent Massey.

CANADIAN UNIVERSITIES

by SIR ROBERT A. FALCONER

ALMOST every large city in Canada has a university. Montreal indeed has two, and Toronto three federated into one. The sites of these seats of learning are often beautiful, their grounds are spacious and their buildings numerous and architecturally attractive. In their totality they are as a rule the most impressive ornament of the city. The students come, as is to be expected, chiefly from their neighbourhood in widening circles, first from the city itself, then from the nearer parts of the province; some draw from the Dominion at large. Those who judge values by the dollar cannot but count the university among the larger material assets of their community; for a modern university is a great spending centre: students whose homes are outside the city bring to it what they pay out in fees, in costs of living and for their sports and entertainment; while those who belong to the city keep in it the money they would have taken to some other place, had they needed to go elsewhere for their academic education. Both for its financial importance and for the adornment of its buildings, set in a park, a great university is prized by many citizens who have no knowledge of how it came to be there, and very little appreciation of its real value now that it is firmly established in their midst.

There are twenty-seven universities registered in the Survey of Education made by the Dominion Bureau of Statistics. Some of these are quite small, but most have a good enrolment of students. These universities have for years met in annual conference. They have come to recognize that as Canadian institutions they possess common interests, though each has its strongly marked individuality, and is not in any sense directed from a Dominion centre. Education is of course a provincial affair. Its standards are under the control of each provincial legislature. It is from the province that a university must get its charter. Once at least an application has been made for a charter from the Dominion parliament, but it is improbable that constitutionally it could be granted. Some of the older universities have had

royal charters from pre-confederation days. Several universities owe but the slightest obligations to their provincial government; King's, Dalhousie, Acadia, St. Francis Xavier, Mount Allison, St. Joseph's, Bishop's College, Ottawa, McMaster are quite independent. Others though autonomous are aided by the province: Laval, Montreal, McGill, Queen's, Western Ontario. The province stands behind the universities of New Brunswick, Saskatchewan, Alberta and British Columbia, while those of Toronto and Manitoba are also provincial, though the federated universities and colleges receive no direct financial aid from the legislature. This state of affairs means that there is great variety in the character and relationships of Canadian universities.

One may venture to go further and say that their graduates are recognizably different. This is obvious in the case of those from Laval and Montreal, products, as they are, of a different culture, the Catholic-Latin in contrast to the secular Anglo-Celtic. A French gentleman from Quebec is a distinctive asset in Canadian society. But also among graduates of English-speaking universities there are varieties of type; for example, an arts graduate from Queen's has a note that differs from a McGill man's, and even among the federated colleges of Toronto there are some differentiating features. Professional education is more uniform, except in so far as it bears the mark of higher standards due to better local equipment. On the whole, the same character of education prevails throughout the English-speaking portions of the Dominion. The content of the B.A. pass degree is similar in general, though there are differences due to historical backgrounds. Members of the teaching staffs are often transferred from one university to another, they themselves having undergone similar training in the great universities of Canada or of other countries.

All arts courses began in the college, as was the case in the United States. In Canada the old college survives in the university. The college was usually a church institution, and in the earlier stages

the teaching was no better than, if indeed as good as, that done in the higher schools of Britain and Europe. But the colleges were a worthy effort to provide, in the poor and sparsely settled provinces, opportunities for a liberal education and a preparation towards further studies for the ministry of the church. Each tried to preserve ideals of education which its fathers had brought from beyond the seas. In Quebec, Jesuit education, especially as it had been shaped in France, was reproduced in the institution which is now called Laval, and both in it and in the later University of Montreal, with their collegiate dependencies throughout the province, the system has given to its people their culture.

McGill University according to its founder's intention was to have begun in a college. James McGill, on the advice of his relation by marriage, John Strachan, later Bishop of Toronto, left a large part of his fortune and his estate in the vicinity of Montreal for the establishment of a university. In Strachan's view its centre was to be an arts college; but owing to controversy it was so slow in getting under way that, to save the will from being invalidated by relatives, the school of medicine at the Montreal General Hospital was made the faculty of medicine of McGill University. In 1829, teaching was begun and it has continued ever since. Instruction in the McGill College of arts did not commence until 1843.

The two oldest colleges in English-speaking Canada are the University of King's College, founded at Windsor, Nova Scotia, in 1789 and now in Halifax federated

with Dalhousie University, and King's College, now the University of New Brunswick, founded at Fredericton in 1801. These were both under Anglican control and loyalist influence. Their professors had been educated in Oxford, Cambridge, or Dublin, and their object was to give the sons of the ruling classes the traditional English education, and thereby make it unnecessary for them to go to Harvard or Yale where they might imbibe revolutionary ideals. The same purpose actuated John Strachan who, though himself a product of Scottish universities, got a royal charter for King's College, Toronto, in 1827, and hoped to offer in it, to the young men in attendance, an education, Anglican in tone, which would counteract anti-loyalist tendencies and confirm in power the dominant classes. In these old King's colleges there existed to some extent the idea that a college education should turn out 'gentlemen' or 'respectable citizens', as was held to be its aim by many in the Oxford and Cambridge colleges of the 18th century. There is a famous remark by an Oxford dean: 'A knowledge of Greek not only enables those who possess it to feel conscious superiority over others, but also leads to positions of great dignity and emolument'. This endeavour to produce through the college the social tone of a gentleman's education might have passed unchallenged for a generation, had the Anglicans been the only section of the population which wished a higher education. But they were in a minority. Most of the Scottish and many of the north of Ireland immigrants were Presbyterians. The Scottish people brought with them a rooted respect for learning for its own sake; they had been accustomed to the common school, to national universities, to college trained

Below:—University of King's College, Halifax, N.S.

Centre: — Macdonald Memorial Library,
Dalhousie University, Halifax, N.S.



teachers and to educated ministers. They were strongly democratic and demanded for their sons whatever opportunities higher education might open up to them. Under Scottish influence and on the model of Edinburgh University, Dalhousie College was founded in 1818, McGill, at least in its medical faculty in 1829 (the charter dating from 1821) and Queen's in 1841. Methodists had come in large numbers from the United States as loyalists and later settlers, and from England. Led especially by Egerton Ryerson, they too were eager for such opportunities as would permit their capable young men to become intelligent citizens and leaders in a democracy; they demanded freedom in higher education and in professional training. In Ontario at Cobourg they established Victoria College under a royal charter in 1841, and in the Maritime Provinces, at Sackville, Mount Allison College in 1862. The Baptists founded Acadia College at Wolfville, Nova Scotia, in 1838, and McMaster at Toronto in 1877. American influence was more evident in the Baptist and Methodist institutions than in the Scottish or the Anglican. After King's College, Toronto, became secularized in 1849, Bishop Strachan with indefatigable efforts got Trinity College and University established in Toronto in 1852. Bishop's College in Lennoxville, Quebec, also under Anglican control, was opened in 1845, to provide a liberal education, 'modelled on the lines of Oxford and Cambridge,' for the sons of English settlers and loyalists in the Eastern Townships who might be tempted by the advantages of the neighbouring colleges in New England.

Ecclesiastical controversy was the bane of early college education in the provinces. It led to the founding of many small

colleges; it impeded the beginning of teaching and lowered its quality. Those colleges reflected the educational outlook and the social ethos of the racial and denominational elements which had been introduced into the country and which lived side by side without assimilation. The struggles were heightened by the poverty of the pioneers. There was this to the good in those struggles, that in some degree cultural values were preserved. While their purity was often sullied in the turmoil, the contestants made great sacrifices to keep them in being, at a time when there was danger lest the effort to make a bare living might have deadened the people to their spiritual inheritance.

The two areas in which the struggles were most acute were Nova Scotia and Upper Canada. In the former, the effects have not yet been quite obliterated, though there is a partial federation of the two oldest universities, King's having moved to Halifax and united its forces with Dalhousie, both remaining independent administratively.

Happily in Toronto the marks of 'old unhappy far off things and battles long ago' have almost vanished in its present comprehensive and harmonious federation. In the faculty of arts there are four colleges: University (provincial), Victoria (former Methodist), Trinity (Anglican), St. Michael's (Roman Catholic). Victoria and Trinity hold their university functions in abeyance except that they teach and give degrees in theology. All students in arts must enroll in, and are under the discipline of, one or other college, to which they pay their fees and in which they get instruction in the languages, except Italian and Spanish, and ethics. Without further

Below:—Mount Allison University, Sackville, N.B.



UNIVERSITY
OF
TORONTO
Toronto, Ont.



Victoria College.



St. Michael's College.



Trinity College.



University Library.

fee they all receive instruction in the university classes and laboratories and use the central library, except for small charges for these services and for health and athletic activities. The curriculum is set by the faculty of arts, on which the professors of all the colleges as well as of the university have seats; the examinations are conducted by the faculty of arts and the Senate of the university awards the degree. All the expense for the teaching of the non-collegiate subjects is borne by the governors of the university on behalf of the province. Also all the other faculties except arts are under their full control.

The origins of the Canadian college having been dealt with in outline, the rise and growth of the university must be considered. The modern university is in such a real sense the child of the revival of science in the 19th century that it is almost a new creation. By the number and size of the new faculties the old college has been overshadowed, as old Trinity church is by the immense commercial structures of lower New York. In the new state universities of this continent the arts college has been replaced by the faculty of arts. For long, the humanities which had their home in the colleges were reluctant to give recognition to the upstarts of science; indeed some of the less acute professors contrasted science and the humanities as being essentially antagonistic, just as the prejudice prevailed that science and religion must be enemies. In both cases the fault was partly that of the man of science, whose eyes were sometimes dulled to the fact that the primary importance of science lies not in the objects to which it is directed but in its spirit and method.

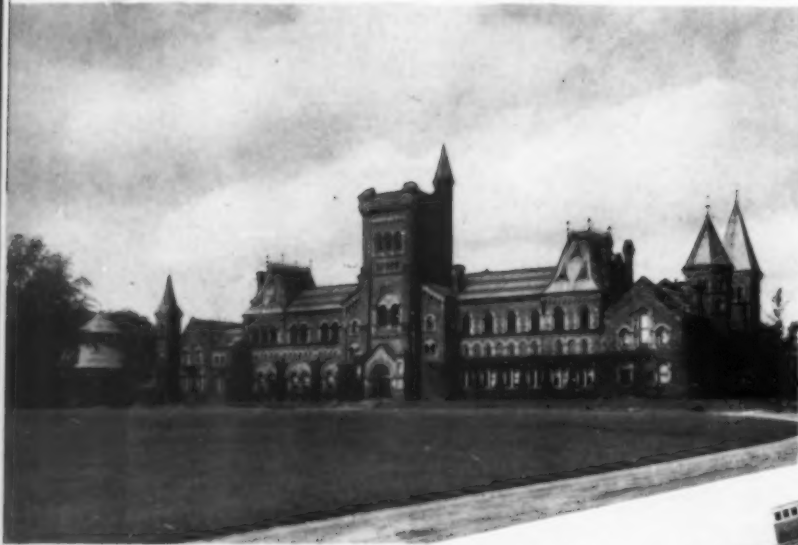
The rise and progress of modern science has been a fascinating spectacle. In the early 19th century, the arts curriculum of the Scottish universities, to which the Canadian colleges owed a great deal, contained, apart from mathematics, only one science, natural philosophy or as we now term it physics, one of three philosophies which the mediaeval universities prescribed for a liberal education, the other two being moral and metaphysical philosophy. It was in the faculty of medicine that the natural sciences were found—natural history, botany and chemistry, all preparatory to the applied sciences of anatomy, physiology and path-

ology. The entry of the pure sciences into the arts faculty of modern universities took place in the latter half of the 19th century. This led to vast transformations of the teaching in content, spirit and method. Research brought triumphant discoveries and created hypotheses of far-reaching effect. Today physics and chemistry are the two fundamental sciences; indeed they trench on one another's borders when the constitution of the atom is considered. Both these sciences are being sub-divided into specialized departments. The natural sciences, so called, have likewise undergone internal fission through changing hypotheses, being influenced also by the newer constructions of chemistry and physics. History, moreover, has felt the effect of research profoundly. The range for the discovery of facts has been immensely enlarged, and the manner of dealing with them is less subjective, though the indifference of some scholars to the literary form in which they have presented their historical re-constructions, has led many educated readers to wish for the return of the treatment of history as, in part at least, an art. Philosophy has given ear to the hypotheses of science, especially when its more recent interpreters have, in their theories of the constitution of matter, approached the realm of metaphysics. From philosophy there has hived off the semi-scientific department of psychology, and it thrives lustily. Economics, geography, commerce, political and social theory are disciplines affected by science. Even literature and the older humanities have been coloured by the new atmosphere. The study of comparative literature, of sources, of the origins and affinities of language is conducted by scientific scholarship. The process of education itself has become a matter of earnest scientific investigation; in the result, differing theories divide pedagogical thought and practice.

The applications of science have almost re-created the professions. The day is long ago past when physicians and surgeons were trained in private schools; now the faculties in universities base their clinical instruction in medicine and surgery on modern laboratory teaching in the pre-medical sciences and carry it out in magnificent hospitals with their own laboratories and with the most recent appliances and equipment. Two generations ago the civil engineer commanded the profession; now

CANADIAN UN

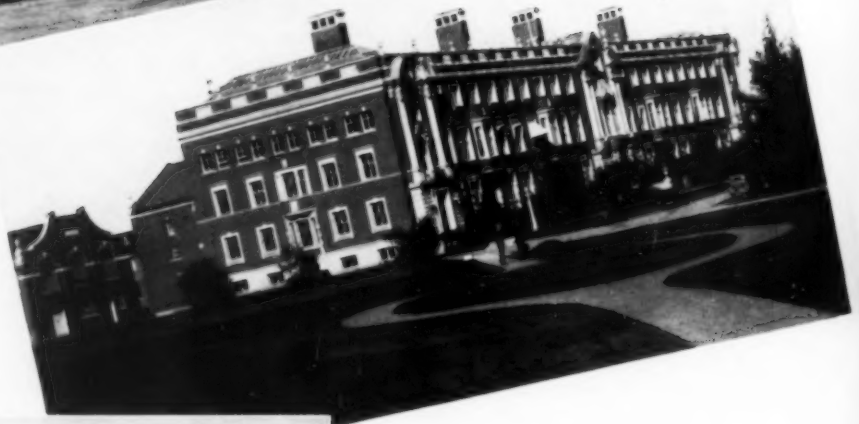
Buildings rep
resent
Ontario, Manitoba, Sas
katche
British Colum



Top:—University of Western
Ontario, London, Ont.

Above:—University of Toronto,
Toronto, Ont.

Lower:—Queen's University,
Kingston, Ont.
Courtesy C.G.M.P.B.



Top centre:—McMaster University,
Hamilton, Ont.

Above:—University of Alberta,
Edmonton, Alta.



N UNIVERSITIES

representative of
Saskatchewan, Alberta and
Columbia.



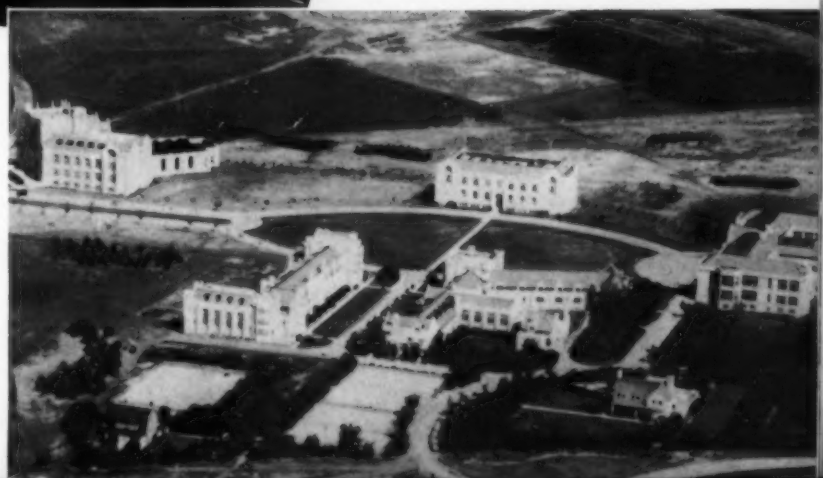
Top: — University of Ottawa,
Ottawa, Ont.
Courtesy C.G.M.P.B.

Above: — University of British
Columbia, Vancouver, B.C.



Above:—University of Manitoba,
Winnipeg, Man.

Right:—University of Saskatchewan,
Saskatoon, Sask.



CANADIAN UNIVERSITIES

Buildings representative
of
Quebec, New Brunswick and
Nova Scotia

(1)



(2)

(5)



(3)



(6)



(4)



(7)





- 1 University of New Brunswick, Fredericton, N.B.
- 2 Acadia University, Wolfville, N.S.
- 3 Mount Allison University, Sackville, N.B.
- 4 University of Bishop's College, Lennoxville, Que.
- 5 University of King's College, Halifax, N.S.
- 6 St. Francis Xavier University, Antigonish, N.S.
- 7 Dalhousie University, Halifax, N.S.
- 8 McGill University, Montreal, Que.

Courtesy S. J. Hayward

- 9 Laval University, Quebec, Que.
- 10 St. Joseph's University, St. Joseph, N.B.
- 11 University of Montreal, Montreal, Que.

Courtesy Canadian Airways Ltd.

(8)



(9)



(10)



(11)



Acadia University, Wolfville, N.S., Memorial Library.



Rhodes Hall—

he shares it with the electrical, the chemical, the sanitary, the mining engineer, the expert in steam and water power, as well as others. The university was called upon to make provision for all these; for forestry and dentistry also. This professional development was very costly. Each scientific department, pure or applied, had to get its own laboratory and equipment; apparatus soon wears out and has to be replaced by the newest types; supplies also for carrying out experiments are large items of expense.

This new world of scientific thought and its applications was not confined to any one nation. The lead came naturally from Europe and Britain; but the United States did not lag long behind. Canada also issued from its backwater into the current and was caught in the sweep. From early days Canadian men of science had studied the geological nature of the land and had given attention to agricultural problems. By the middle of the 19th century there were also in the colleges a few men of high standing in the sciences. Of these John William Dawson (later Sir William) in McGill was the most eminent, and under his leadership the development of the university was very rapid. He induced citizens of Montreal, then by far the most wealthy city in Canada, to make substantial gifts for its endowment. Even greater benefactors followed, and McGill became widely known for its scientific and professional equipment.

The church and other private colleges could not meet the demands for expansion into modern universities. In Ontario the government was very slow in recognizing its duty towards the University of Toronto, and for many years it took no responsibility

for professional education. In the last decades of the 19th century far-sighted men came to realize that in unity alone could there be strength and hope for state aid. This led to federation, as already described, which has been one of the most original and beneficial academic movements in Canada. At last as an outcome of federation, the needs of the university and its colleges becoming more insistent, the government of Mr. Whitney appointed a commission to report on the state and requirements of the provincial university. The members of the commission were men of the highest standing, and their report was epoch-making, not only for Toronto, but as an example to other universities. The commission recommended a revised constitution for the university, though the federated colleges retained their rights within it, and laid the responsibility on the legislature for financial support of the university and of University College, the administration of their affairs to be handed over to a board of governors who were not to be subject to direct political control, though they were to receive, from the government, approval for their estimated annual expenditures. The commission's report was adopted. Since that time the university has received generous support from the legislature as well as from private benefactors, and no government has attempted for political purposes to interfere with the policies of the governors.

The constitution of the University of Toronto and the action of the Ontario Government were influential in the rise and shaping of the western universities. The University of Manitoba is the oldest of these. It began as far back as 1877 in a university to grant degrees but not



Engineering Building



War Memorial Gymnasium

as a teaching institution, and with it were affiliated the existing incorporated colleges maintained by the churches. The pre-teaching days lasted from 1877-1900, but gradually the university, with the colleges still holding their place in a federation, has grown into a great modern teaching institution supported by the province. The universities of Saskatchewan (1907), Alberta (1908) and British Columbia (1912) did not begin with colleges, but were established, partly on the models of the large eastern and the American universities, by the legislatures of the provinces, and ever since they have received generous support without political control. The liberality of the governments, as well as the ability of the men who directed their rise and development, are attested by the fine buildings which adorn each campus and by the excellence of their staffs. On the prairies, agriculture has been given a relatively larger place than in the universities of the east.

The province of Quebec possesses no state university, but the legislature has made substantial grants in aid to Laval, Montreal and McGill. In Nova Scotia no university gets provincial support, though the legislature maintains a technical college and gives some indirect aid to medical education.

The present century, exclusive of the war years and the recent depression, has seen great growth in population and concurrently rapid development of the natural resources of the Dominion. Wealth has increased apace. But Canada was later than other countries in getting into her stride. The rich men of the United States and their state legislatures gave lavishly to their institutions. In England also cities sup-

ported local universities which had originated in large private benefactions. In Canada city support for local universities has been very small, and the central government at Ottawa has confined itself to supporting laboratories in which practical researches have been conducted. But in Montreal, Toronto and other cities not a few men and women of wealth have shown large generosity. Whether such will appear in the future is uncertain, though the example of the United States universities is encouraging. Special mention should be made of the well considered and generous grants made by the Carnegie and Rockefeller Foundations of New York to Canadian institutions both east and west. The wisdom manifested in their distribution has been a fine stimulus to the improvement of the academic status both in the arts and the professional faculties.

Canadian universities owe a great deal otherwise also to their neighbours to the south. The rapid development of their universities has been a splendid stimulus. They have been generous in their award of scholarships to our graduates, many of whom have brought back methods and ideals of post-graduate study and research which have re-inforced the efforts of the best professors at home. The pioneers in this academic advance came from the new Johns Hopkins, more than a generation ago; their successors have come from Harvard, Columbia, Chicago and other centres of scientific investigation. During this century there has been, moreover, a steady and enlarging stream of Canadian graduates to Oxford, Cambridge, London, Edinburgh, Paris and other universities; with the result that our faculties are staffed by many who are familiar with the



Top—Science Building, Dalhousie University, Halifax, N.S.

Centre:—Manitoba Union (left), Engineering Building (right), University of Manitoba, Winnipeg, Man.

Above:—Macdonald College, McGill University.

outlook and methods of the best graduate schools in other countries.

Happily, Canadian students who have taken an undergraduate degree do not now need to cross the border, or go to Britain or France to pursue post-graduate studies. In the larger universities at home they can find competent professorial guidance, fairly good libraries and excellent equipment both in laboratories and hospitals. The post-graduate faculties are growing fast. But those who can, should go abroad to continue their intellectual growth in the midst of new cultures, and to be mentally enriched by their contact with scholars and scientists of world-wide renown, and by the life of which they will get glimpses in an environment very different from that of their own country. It is to be hoped, therefore, that benefactors will provide more scholarships for well chosen graduates to continue their studies in the leading academic centres of the world.

During the past generation the standards of the high schools of the provinces have been so improved that the entrance requirements of the universities have been raised correspondingly. Within the last decade, the university of Toronto has set the honour standing for matriculation into arts and the professions, that is the equivalent of the former first year pass course in arts. As the provinces make better provision for their secondary schools, the universities will place upon them the duty of undertaking more of the earlier academic work. Possibly this movement may develop in some places into the establishing of Junior colleges. Not only have the standards of the old college arts degree been raised, but the content of the courses has been greatly changed. This has been partly due to the adoption from Britain, many years ago, of the two standards in the arts degree—pass and honours, which differentiates the Canadian degree from the American. Also, partly following the example of the universities of the United States, the system of options has been introduced, though not to the same extent.

The fundamental reason for the change in the character of the old college arts degree is to be found in the structure of modern society, which is largely due to the applications of science, with its result in the creation of new vocations. Ours has become an industrial and commercial era, and the promises of science have induced investigation of the material resources of the country: its agriculture, forests, fisheries, minerals, and most recently its oil. Engineers, chemists, physicists are

called for. Commerce has grown to enormous proportions, investments also and life insurance with associated enterprises. To supply their needs arose a demand for persons prepared by higher studies in mathematics and economics to occupy actuarial and administrative positions. Government has assumed more control over the natural resources of the country, over trade and social welfare, while the great increase in its expenditures has led to the search for new sources of taxation. New departments have been created and old ones expanded. Now, therefore, the university trains specialists for resulting positions in botany, zoology, geology, economics, statistics, and that too in the faculty of arts. Music and the fine arts have been coming to their own as possessing very high cultural value, and are getting a secure place in university education. To meet all this great variety of demand, the arts faculties are frequently modifying old courses and framing new ones.

There is not space to linger on the transformations in the training for the old professions, nor on the development of newer ones such as dentistry, household science, commerce. But reference must be made to a new feature in the modern university of English-speaking countries: extension work. This grew out of the nature of the university itself which is the centre for the discovery of new truths and for the diffusion of knowledge. Higher knowledge cannot be confined to those who are privileged to study within the limits of a university at the hours fixed for those who take full-time courses. Outside there are many people, busy all day for most of the week at their regular callings, who desire education, even more than some who pass from school without a break right into college. Others wish to continue their studies after they have graduated; of these most are teachers. Hours have therefore been arranged to suit such, and at night the university buildings may be seen lighted up, as eager part-time students work under the direction of instructors most of whom are members of the regular university staff. Other subjects, however, are taught besides those on the undergraduate curriculum, most in short courses for mature persons. Lecturers



Top:—Studley Campus, Dalhousie University, Halifax, N.S.

Top centre:—St. Francis Xavier University, Antigonish, N.S.

Bottom centre:—University of British Columbia, Vancouver, B.C.

Bottom:—Natural Science Building, University of Western Ontario, London, Ont.



Manitoba Union,
University of Manitoba,
Winnipeg, Man.



Medical Building,
University of Alberta,
Edmonton, Alta.



University of British Columbia,
Vancouver, B.C.



Field Husbandry Building,
University of Saskatchewan,
Saskatoon, Sask.

also deliver courses in communities throughout the province. This type of instruction has been most fully developed by the agricultural colleges in the East and the faculties of agriculture in the West, who carry to the farmers the approved methods of farming and the recent results in scientific agriculture. Adult education is another phase of extension. To-day this is making rapid strides, and it is supported by departments of the provincial governments and by private effort as well as by the universities. Of recent years, a remarkable contribution has been made to the social and economic welfare of Nova Scotia by the extension department of St. Francis Xavier College, which is bringing a new spirit into the communities of fishermen, miners and farmers.

The Canadian universities are co-educational. There are no separate colleges for women such as Bryn Mawr, Vassar, Wellesley and others in the United States. At McGill and at Trinity in Toronto, there are colleges for women, who however take the regular lectures with the men. Most of the other colleges and universities have residences for women, some of them very finely equipped. Residential accommodation for men is in general less adequate; possibly the existence of fraternities of the American type in Toronto and McGill has militated against its growth. The social and sporting activities have been reasonably provided for; Hart House in Toronto, the centre for men students, has a widespread reputation for its adequacy and beauty. The physical health of students is supervised and some athletic exercise is either compulsory or recommended. While games are pursued with zest, the Canadian undergraduates do not go to the extreme in sport indulged in by their American neighbours, to the frequent distress of academic authorities. The Canadian student comes as a rule from a modest home and he must make the best of his opportunities. He works well, and when he secures his degree he has earned with effort one of good academic standing. Scholarships are offered, but on far too meagre a scale, though the need for them is appealing to generous benefactors. The fees of Canadian universities are not high as compared with those of the leading private institutions to the south. Unfortunately it has been necessary to increase fees to meet loss from investments or from reduction of provincial grants, and that

too at a time when it costs much more than formerly to secure an education.

Some idea of the magnitude of the work of Canadian universities may be got from these figures which are taken from the latest Annual Survey of Education made in Canada in 1936: There were 17,290 full-time undergraduates in arts, 594 in pure science, 788 in commerce, 863 in education, 3,074 in medicine, 3,480 in engineering and architecture, 2,012 in theology, 1,005 in law, 1,108 in agriculture, 98 in forestry, 926 in household science, 422 in dentistry, 499 in pharmacy, 361 in public health and nursing, 241 in veterinary science, 239 in music, 134 in social service. There were 1,419 post-graduate students in arts and pure science. On the teaching staffs doing post-matriculation full-time work there were 2,692 men instructors and 352 women; doing part-time work there were 2,106 men and 259 women. Actually this is a large showing, but the teaching staff is much smaller relatively to students than in the United States. Annual expenditures amounted to \$18,768,302, of which only \$613,629 went for new buildings; \$481,000 were devoted to repayment of loans and to interest. During the depression the construction of buildings was almost at a standstill. Through these hard years the work of the universities has been much crippled, but unwearied effort has been successful in maintaining the opportunities and standards for undergraduates; research, however, has been reduced, nor have the libraries and the equipment of laboratories been adequately kept up. Present conditions must not be taken as satisfactory. When economic prosperity returns the universities will not only have to make up leeway, but must spread new and larger sails for fresh voyages.

Figures give a very general impression, though they do show that in Canada university education is a large factor in the social life of the people. One cannot contemplate without satisfaction what has been accomplished in the provinces of the west. The future of their culture is full of hope. In the east the record of our past is encouraging, though not such as to warrant complacency. Fortunately we have the example and stimulus of some of the greatest universities of the world close to our borders. Our human material deserves at least as good educational opportunities as theirs.



Macdonald Engineering Building, McGill University, Montreal, Que.

QUEEN'S UNIVERSITY
KINGSTON, ONT.



Grant Hall Tower.



Ontario Hall (Physics Building)



Douglas Library



NORWAY

by C. RASMUSSEN and A. GILBERT HALE

Photos by Wilse Energet

NORWAY, as it appears on the map, is the face of Northern Europe turned toward the great oceans. Its length is so great that if the country were turned southward from its most southern point it would stretch over Denmark, Germany, Switzerland and Italy—all the way to Rome. Norway's westernmost point is on the same degree of longitude as Amsterdam and the easternmost on the same degree as Leningrad, a geographical position that makes for great climatic variations.

To the north, south and west, the country faces oceans only, and is encircled by the Skagerrak, the North Sea, the Atlantic Ocean and the Arctic Ocean. South Norway is practically on the same degree of latitude as South Greenland. The climatic difference between these places is due principally to the Gulf Stream, and secondly to the flat grounds—so called banks—which prevent the deepest and coldest ocean water from reaching the Norwegian coast.

To the east, the country borders on Sweden and Finland, and the boundaries between these countries and Norway are marked by "streets", cut out in the great forests on the border-line. Over ranges of mountains the border has been marked by cairns.

The greater part of the Norwegian coast is protected by a belt of islands and skerries. This natural protection against the attacks of the ocean is of the utmost importance. The sheltered coast-water is the chief road of communication, where even the smallest vessels can go in safety. The fiords and the sounds in the skerries support rich coastal fisheries, and along the shore are found the homes of the fishing population, the fishing establishments, and factories for the utilization of fish products.

Norway is one of the most mountainous countries in Europe. Deep fiords penetrate far inland, especially in South-western Norway. A voyage among these fiords, with precipitous mountains on both sides, presents such awe-inspiring scenery that the traveller is spellbound. In places the narrow fiords suddenly widen; the mountains no longer rise abruptly from the sea;

smiling landscapes of well-cultivated farms and of orchard trees in bloom greet the traveller's eye. In the background, sombre mountains tower against the sky. Above them, reflecting the sunshine, is the region of perpetual snow and ice.

Norway's marked variations of climate and scenery are reflected in the character and culture of the people. They find expression in a copious literature, and such authors as Ibsen, Bjornson, Hamsun and Sigrid Undset — all literary Nobel prize winners, are known throughout the world. Among musical composers may be mentioned Grieg, Sinding and Johan Svendsen. Grieg's compositions, especially, bear the imprint of the Norwegian nature.

The maritime situation of Norway has influenced the development of the people from the earliest times. The oldest sites of human habitations have been found on the south coast, and the relics from these sites show that the dwellers were migrants who lived by fishing and the chase. The country had a wealth of game, the sea yielded an abundance of fish, and there must have been rich oyster banks, as the dwelling places everywhere contained great quantities of oyster shells. As the supply of game decreased, the people had to find other means of subsistence, and the evidence indicates that at a very early period they had made the transition to agriculture.

Through the stone and the bronze ages small progress was made in forming settlements and cultivating the land. With the arrival of the iron age the clearing of the land received an impetus. Norway was well endowed with iron deposits, and the expense of producing iron was less than elsewhere in Western Europe. Comparing the farm implements of iron at the disposal of a Norwegian peasant with those used on Charlemagne's estates in France, it appears that the Norwegian peasant of that period had a striking advantage. During the early iron age an intense cultivation of Norway took place, and all good, easily cultivable soil was turned to account. About the year 800 A.D. the

Left:—A typical fjord in Norway navigated by 30,000 ton tourist steamers. Calling her mate on the other side.



Fishing from open boats.

The Lofoten Islands.





A Norwegian fishing fleet.

A characteristic Lofoten fishing station in Norway.





population of the country was actually confined to room.

The Norwegians inevitably became able seamen and navigators. By their voyages on the high seas, they obtained a knowledge of the British Isles, and they were especially attracted by the islands to the north of Scotland. There the land was good, and the climatic conditions closely resembled those of Western Norway. When their homeland became too crowded the Norwegians drove away the inhabitants and colonized these islands.

In their earlier voyages, the Norwegians sailed out with a small number of ships, and their object was chiefly to secure plunder. These cruises, which took place in the summer season, were designated as "viking cruises". No youth was admitted to the fellowship of men unless he had participated in such cruises. Later, the vikings undertook voyages with large fleets numbering more than a hundred ships, founding kingdoms in England, Scotland and Ireland. On the continent of Europe, as well, the vikings appeared in great numbers as conquerors. The coast of the Netherlands was ravaged, and a kingdom founded at the mouth of the Rhine. Northern France was repeatedly menaced. In the eight hundred and eighties great contests raged; for more than a year Paris had to defend itself against a viking army of 40,000 men with 700 ships and large engines of war. Not until 911 did the French king secure peace by ceding to the vikings the province of Normandy. The expeditions extended to Spain, and even into the Mediterranean where they ravaged the coast of North Africa. The sagas also contain accounts of the achievements of the vikings at Constantinople.

The Norwegians colonized Iceland, then uninhabited, and a prosperous colony grew up in Southern Greenland. Owing to conditions not yet unravelled, the latter colony decayed. On their voyages between Iceland and Greenland these Arctic colonizers were driven out of their course and on such an occasion Leif Eriksson discovered America.

The ancient viking cruises have long since passed away and the small, hardy nation's struggle for existence continues in new forms. The Norwegian people have again had to resort to the sea to make a living. Their vessels navigate all oceans, and descendants of the fierce vikings now

conduct a peaceful carrying trade between nations. Norway's merchant marine is to-day the third or fourth largest in the world.

In the whaling industry the Norwegians have been pioneers and it is, indeed, strange to consider that the scant population living within the Arctic circle carry on whale fishing at the cap of the south pole. Until a few years ago the Norwegians had practically sole control of the whaling industry, but in recent years, other nations have gone in for this species of catch. These nations, however, still rely upon the Norwegians for able gunners and whalers.

The other principal industries of the country are agriculture, forestry, fisheries, industrial arts and handicraft. Norway's peasants are freeholders, have been so from gray antiquity. Custom and law have protected the peasant's proprietary rights beyond the usual forms of ownership. In olden times the family always had the right to repurchase an estate which had passed from its ownership, even if the new owner should desire to remain in possession. This provision of the law is still in force. Although the law may seem unreasonable, it has a great advantage, namely, that estates are not so easily saleable and are more apt to remain in the possession of the family. The Norwegian peasant loves his acres; the estates, as a rule, are well cultivated; and the result is that the country to-day is in a fair way of being self-supporting as regards agricultural products.

Silviculture, as well as agriculture, is chiefly carried on in the eastern and southern parts. In connection with the utilization of forest products, a great industry has sprung up which, at the same time, uses the country's wealth of water power.

While there is in the southern part of the country a varied industrial activity, Northern Norway is practically restricted to its fishing industry. Enormous shoals of codfish approach the coasts to spawn and to seek food on the banks. From the earliest periods the history of Norway contains narratives about these enormous annual arrivals of cod from the sea. The cod come to the coasts of Norway in the month of January, departing in the period of May-June.

The arrival of the cod creates feverish activity. From 25,000 to 30,000 men participate in the fishery. The fishing takes place close to the coast and, in order to conserve the fisheries, there are certain restrictions; it is strictly prohibited to use trawl along the coast, and the fishery is thus carried on with comparatively small boats.

The catch is, in part, salted and dried, while a large portion of the production is suspended from poles — the so-called drying stages. Owing to the cold, dry air in Northern Norway the fish, without being salted, become dry throughout, with a moisture content not exceeding 8-10 per cent. This product is called stockfish and is exported to various countries. It possesses excellent keeping qualities, even in a relatively hot climate.

It is by virtue of another product, however, that Norway's cod fisheries have achieved their greatest fame. The cod is the source of one of the oldest and most valuable medicinal products — the oil contained in the liver. As far back as there are records of the saga period of Norway, cod liver oil is mentioned as a wholesome nourishment. In the equipment of the ancient vikings for their voyages, wooden kegs of cod liver oil were indispensable. Even then, it was well understood that this product was of significance far beyond the nutritive value of the oil as a fat.

The first production of cod liver oil was very simple. The liver was merely left standing in a vessel until the liver

cells burst. The oil then rose to the surface and was skimmed off. This method produced a much smaller yield and a far inferior quality, as contrasted with those obtained by modern processes. The latter separate the oil from the liver as quickly as possible in order to obtain the best product as regards taste and smell, as well as vitamin potency.

Of late years considerable progress has been made in improving the quality of Norwegian cod liver oil. Science and practical experience have both contributed to this result. The excellence of the Norwegian product is accounted for partly by the fact that the fisheries are conducted close to the coast, enabling the fishermen to deliver the catch to the producing points within a few hours after the fish have been taken from the sea. Further, the fishing is carried on north of the Arctic circle, and, during the greater part of the season, in periods of low temperature. In addition to these natural advantages, the present industry is a highly specialized one, based on modern science as well as on the experience of many generations.

The cod liver oil produced in Northern Norway has to be refined further by the factories in the southern part of the country, where the entire export business is concentrated. To keep the exports at the highest level possible, the Norwegian Government has established control to ensure production under hygienic conditions and by methods that will secure a product of fine quality.



Typical coast
structure, Northern
Norway.



Norway—in winter garb.

Section of Hjelte Valley characteristic of Northern Norway.



EDITOR'S NOTE-BOOK

Donald W. Buchanan who writes on Canadian Art in this issue has contributed several articles in early numbers of the Journal. He was born in Lethbridge, Alberta, where he received his primary education, later attending University of Toronto and Oxford University. Formerly a journalist and art critic he is now Director of Talks, Canadian Broadcasting Corporation. Mr. Buchanan is the author of the biography "James Wilson Morrice, Canadian Painter and Nomad".

Sir Robert Falconer, who writes on "Canadian Universities" in this issue, was born in Charlottetown, P.E.I. and received his early education in the British West Indies. He graduated from London University in 1888, obtained his M. A. degree from Edinburgh University in 1889 with honours in classics, and his B. D. in 1892. From the Universities of Leipzig, Berlin and Marburg he received his D. Litt. in 1902. Sir Robert was president of the University of Toronto during the period 1907-1932. Knighthood was conferred on him in 1917.

Sir Robert has always taken a keen interest and active part in the intellectual and administrative advancement of Canada. He is a fellow of the Royal Society of Canada of which he was president in 1932; is a member and former president of the Royal Canadian Institute and was president of the League of Nations Society in Canada in 1936. Many honorary degrees have been conferred on him by the principal universities of Canada and the United States.

The article entitled "Norway" appears in this issue under the joint authorship of C. Rasmussen and A. Gilbert Hale. Mr. Rasmussen, born in Bergen, Norway, was educated in England as well as in Norway. He is now a director of Johan C. Martens & Company, Bergen. Mr. Hale, a native of Arkansas, U. S. A., came to Canada in 1917 to serve with the Royal Air Force and after two years' overseas service returned to Canada. Mr. Hale has travelled extensively and is at present manager of Charles Albert Smith Limited, Toronto.

EDITORIAL CONTENTS FOR 1939

The Editorial Committee of the Canadian Geographical Journal has arranged for contributions from many distinguished writers for the year 1939 including Sir Ernest MacMillan, Edward Shackleton, Bradford Washburn, Vilhjalmur Stefansson, Rev. Paul Schulte, Don Munday, Lawrence Burpee, Dr. Charles Camsell, Dr. Marius Barbeau, Dr. R. C. Wallace, Hoyes Lloyd and Diamond Jenness.

AMONGST THE NEW BOOKS

Northland Trails, by S. C. ELLS, (Toronto Industrial and Educational Publishing Company, 1938, \$2.00). This attractive book is written from the author's long and intimate acquaintance with Northern Canada, not the facile interpretation attempted by some literary craftsman after a few weeks or months of travel in the wilds. Mr. Ells for more than thirty years has been in charge of engineering and exploratory work from Quebec to the Pacific coast. He knows its dangers and hardships, its "wild joy of living" as few of the present explorers can, since difficulties of time and space have been so greatly lessened by the airplane and the radio.

A man of remarkable versatility and deep sincerity Mr. Ells, in the midst of arduous labour, has contrived to keep his spirit free and give expression in prose and verse and an ever-growing skill with his pencil to "the atmosphere of the Great Northland and the spirit of its people". At the suggestion of many of his friends who were aware of his gift, this collection of certain of his short stories and verses has been published in book form illustrated by the author's own pen and ink sketches.

Some books of this genre tend to be monotonous with a repetition of the same theme and with a suggestion of the amateur, but there is no lack of variety or interest or skill in these stirring tales and poems and sketches. Often there are delightful little explanatory notes indicating the source or inspiration of certain themes, and in one story, "Portage La Loche", there are foot-notes which summarize an important chapter of North West history. These verses and legends will evoke vivid memories among "old comrades of paddle, tracking line and pole" to whom the volume is dedicated. The titles are redolent of the imagery and life of the North: The Challenge, The Northern Gates, The Seekers, The Athabaska Trail, Gold, and the poignant Trapper's Farewell. Heroic and often tragic, the struggles of man with nature with its terrors of hunger and cold are vividly portrayed.

**"In summer heat and winter's bitter cold
Like driven leaves in autumn's whirling gale
The storms of love and lust and lure of gold
Drove restless men along that winding trail."**

Along the glorious brutal Cariboo".

The book is beautifully produced and cannot fail to take its place among our best Canadiana. Incidentally it would be a charming Christmas gift, especially for friends overseas.

THE SMOKE OF THE BRITISH EMPIRE

● If you're a man, and want a gift for a woman—or vice versa—then give W. D. & H. O. Wills's Gold Flake Cigarettes this Christmas. The man's cigarette that women like—clean and smooth to the palate—well and firmly made—Gold Flake will convey your good wishes with the best of taste.



In a Christmas wrapper
in keeping with their
quality.

PLAIN OR CORK TIP

A shilling in London—a quarter here

The Canadian Geographical Society

OTTAWA, CANADA

HONORARY PATRON:

His Excellency the Right Honourable LORD TWEEDSMUIR, G.C.M.G., C.H.
Governor-General and Commander-in-Chief of the Dominion of Canada

J. B. TYRRELL, M.A., LL.D., F.G.S., Honorary President A. P. COLEMAN, M.A., Ph.D., F.R.S., Honorary Vice-President

BOARD OF DIRECTORS:

CHARLES CAMSELL, C.M.G., B.A., LL.D., President

CHARLES G. COWAN, Vice-President

MAJOR-GEN. A. G. L. McNAUGHTON, Vice-President

LT.-COL. G. L. P. GRANT-SUTTIE, Vice-President

HON. W. A. BUCHANAN, Vice-President

HON. A. R. ARSENAULT, Assistant Judge, Supreme Court
Charlottetown, P.E.I.

MARIUS BARBEAU, National Museum of Canada, Ottawa

ARTHUR BEAUGHESNE, Clerk of the House of Commons
Ottawa.

HON. H. V. BIGELOW, Regina, Sask.

F. E. BRONSON, President and Managing-Director, The
Bronson Company, Ottawa.

LAWRENCE J. BURPEE, Secretary for Canada, International
Joint Commission, Ottawa.

G. J. DESBARATS, Ottawa.

COL. W. W. FOSTER, Vancouver, B.C.

K. A. GREENE, Ottawa.

R. C. WALLACE, Vice-President

O. M. BIGGAR, K.C., Honorary Counsel

K. G. CHIPMAN, Honorary Treasurer

E. S. MARTINDALE, B.A.Sc., Honorary Secretary

F. C. C. LYNCH, Department of Mines and Resources,
Ottawa.

C. J. MACKENZIE, Dean, University of Saskatchewan,
Saskatoon, Sask.

L. T. MARTIN, Ottawa.

DUNCAN McARTHUR, Deputy Minister, Department of
Education, Toronto, Ont.

LT.-COL. SIDNEY C. OLAND, Halifax, N.S.

JAMES A. RICHARDSON, Winnipeg, Man.

H. M. SNYDER, Montreal, P.Q.

E. J. TARR, K.C., Winnipeg, Man.

GRIFFITH TAYLOR, University of Toronto, Toronto, Ont.

J. C. WEBSTER, Shediac, N.B.

A. WILSON, Controller of Civil Aviation, Department of
Transport, Ottawa.

Editorial Committee

HON. W. A. BUCHANAN, Lethbridge,

Chairman

F. D. L. SMITH, Toronto

W. EGGLESTON, Ottawa

AEGIDIUS FAUTEUX, Montreal

LT.-COL. G. L. P. GRANT-SUTTIE, Toronto

M. Y. WILLIAMS, Vancouver

D. C. HARVEY, Halifax

MARIUS BARBEAU, Ottawa

J. C. WEBSTER, Shediac

GORDON M. DALLYN,

Secretary

F. C. C. LYNCH, Ottawa

A. B. WATT, Edmonton

OLIVER MASTER, Ottawa

Executive Secretary

GORDON M. DALLYN



The Society's ambition is to make itself a real force in advancing geographical knowledge, and in disseminating information on the geography, resources and peoples of Canada. In short, its aim is to make Canada better known to Canadians and to the rest of the world.

As one of its major activities in carrying out its purpose, the Society publishes a monthly magazine, the Canadian Geographical Journal, which is devoted to every phase of geography—historical, physical and economic—first of Canada, then of the British Empire and of the other parts of the world in which Canada has special interest. It is the intention to publish articles in this magazine that will be popular in character, easily read, well illustrated and educational to the young, as well as informative to the adult.

The Canadian Geographical Journal will be sent to each member of the Society in good standing. Membership in the Society is open to anyone interested in geographical matters. The annual fee for membership is three dollars in Canada.

The Society has no political or other sectional associations, and is responsible only to its members. All money received is used in producing the Canadian Geographical Journal and in carrying on such other activities for the advancement of geographical knowledge as funds of the Society may permit.

Canadian Geographical Journal

INDEX VOLUMES XVI AND XVII, 1938

	Volume	Page		Volume	Page
Adventures in Bird Photography. P. A. Taverner	XVI	265	Finnie, Richard and Alyce. A Day in Paris	XVI	195
Aircraft Industry, Canada's. J. Fergus Grant	XVII	59	Fibres of Gold. T. R. Elliott	XVI	109
Alberta. See Past, Present and Future of the Peace	XVI	127	Francis, Walter. The Petroleum Industry of Canada	XVI	71
Alberta. Rattlesnakes in. Loris S. Russell	XVI	33	Frobisher Bay, Spectacular. Martin J. Buerger	XVII	3
Albright, W. D. Past, Present and Future of the Peace	XVI	127	From Sea to Sea. L. J. Burpee	XVI	3
Alkmaar, The Cheese Market of. J. C. Mills	XVI	101	Fruits, Dried, of Australia. W. Eggleston	XVI	293
Aluminum Industry, Canada's. E. V. N. Kennedy	XVII	249	Gatineau Valley, Orchids of the. H. E. M. Kensit	XVII	18
American Association for the Advancement of Science, 102nd Meeting, No. 2	XVII	vii	Geithmann, Harriet. Child of the Mountains, The Water Ouzel	XVII	241
Annual Meeting, 1938, No. 3	XVI	iv	General John Hale—His Portrait. A. M. Going	XVI	51
Annual Eastern Arctic Patrol, The. D. L. McKeand	XVII	37	Germany. See The Seven Mountains	XVI	43
Apple Industry of Canada. M. B. Davis and R. L. Wheeler	XVII	104	Gilbert, M.C. Lake Shore Gold Mine	XVII	45
Art, Story of Canadian. Donald W. Buchanan	XVII	273	Glasgow, Canada on Parade at. James G. Parmelee	XVI	307
Asbestos. See Fibres of Gold	XVI	109	Glasgow Exhibition, Canada and the. W. H. Van Allen	XVI	153
Australia, Dried Fruits of. W. Eggleston	XVI	293	Golden North, Labrador and North Shore, The. Leo Cox	XVI	203
Back, George, Letters from. Clifford Wilson	XVII	131	Grant, J. Fergus. Canada's Aircraft Industry	XVII	59
Ballads, Cruising for, in Nova Scotia. William Doerflinger	XVI	91	Grant, J. Fergus. Canada's Electrical Manufacturing Industry	XVII	181
Barbeau, Marius, Saguenay	XVI	285	Guatemala. See The Unlucky City	XVII	127
Bermudas, The—Impressions of a Canadian. The Editor	XVII	217	Hale A. Gilbert and C. Rasmussen, Norway	XVII	313
Bird-Life, Some Aspects of Canadian. Hoyes Lloyd	XVI	265	Hale, General John—His Portrait. A. M. Going	XVI	51
Bird Photography, Adventures in. P. A. Taverner	XVI	265	Hedges and Trees. P. C. Perry	XVI	299
Birds. See Wings over Redberry Lake	XVII	93	Highways, King's, of Ontario. R. M. Smith	XVI	159
Buchanan, Donald W. Story of Canadian Art	XVII	273	Holland. See The Cheese Market of Alkmaar	XVI	101
Buerger, Martin J. Spectacular Frobisher Bay	XVII	3	Hungary. Dominic C. De Szent-Ivanyi	XVI	247
Burpee, Lawrence J. From Sea to Sea	XVI	3	International Joint Commission. See From Sea to Sea	XVI	3
Canada and the Glasgow Exhibition. W. H. Van Allen	XVI	143	Kensit, H. E. M. Orchids of the Gatineau Valley	XVII	18
Canada on Parade at Glasgow. James G. Parmelee	XVI	307	Kensit, H. E. M. Ship Canals of Europe	XVI	143
Canada's Aircraft Industry. J. Fergus Grant	XVII	59	Ketchum, William Q. Science in the Shadow of the Pole	XVI	139
Canada's Aluminum Industry. E. V. N. Kennedy	XVII	249	Killikelly, Desmond. The Steel Industry of Canada	XVI	213
Canada's Electrical Manufacturing Industry. J. Fergus Grant	XVII	181	King's Highways of Ontario. R. M. Smith	XVI	159
Canadian Universities. Sir Robert A. Falconer	XVII	295	Koala. See Saving the World's Rarest Animal	XVII	41
Canals, Ship, of Europe. H. E. M. Kensit	XVI	143	Labrador and North Shore, The Golden North. Leo Cox	XVI	203
Chapman, Lyman J. The Climate of Southern Ontario	XVII	137	Lake of the Woods Is Calling You. Charles Clay	XVII	89
Cheapest Tractor, The. A. E. Zischka	XVII	142	Lake Shore Gold Mine. M. C. Gilbert	XVII	45
Cheese Market of Alkmaar, The. J. C. Mills	XVI	101	Letters from George Back. Clifford Wilson	XVII	131
Child of the Mountains, The Water Ouzel. Harriet Geithmann	XVII	241	Lloyd, Hoyes. Some Aspects of Canadian Bird-Life	XVI	265
Clay, Charles. Lake of the Woods Is Calling You	XVII	89	Lucania, Mount, Conquest of, recounted by Bradford Washburn	XVII	165
Climate of Southern Ontario, The. Lyman J. Chapman	XVII	137	MacNutt, Stewart. The Seven Mountains	XVI	43
Cold Storage, Recent Developments in the Use of, in Ontario. E. H. Darling	XVII	122	McKeand, D. L. The Annual Eastern Arctic Patrol	XVII	37
Coleman, W. W. Wings over Redberry Lake	XVII	93	Mills J. C. The Cheese Market of Alkmaar	XVI	101
Conquest of Mount Lucania, recounted by Bradford Washburn	XVII	165	Norway. C. Rasmussen and A. Gilbert Hale	XVII	313
Cox, Leo. The Golden North, Labrador and North Shore	XVI	203	Nova Scotia, Cruising for Ballads in. William Doerflinger	XVI	91
Cruising for Ballads in Nova Scotia. William Doerflinger	XVI	91	Orchids of the Gatineau Valley. H. E. M. Kensit	XVII	18
Dallyn, G. M. The Bermudas, Impressions of a Canadian	XVII	217	Ontario, King's Highways of. R. M. Smith	XVI	159
Darling, E. H. Recent Developments in the Use of Cold Storage in Ontario	XVII	122	Our Heritage. S. C. Ellis	XVI	1
Davis, M. B. and R. L. Wheeler. The Apple Industry of Canada	XVII	104	Ouzel, The Water, Child of the Mountain. Harriet Geithmann	XVII	241
Day in Paris. A. Richard and Alyce Finnie	XVI	195	Paris, A Day in. Richard and Alyce Finnie	XVI	195
De Szent-Ivanyi, Dominic. Hungary	XVI	247	Parks. See Playgrounds of the Prairies	XVI	55
Doerflinger, William. Cruising for Ballads in Nova Scotia	XVI	91	Parmelee, James G. Canada on Parade at Glasgow	XVI	307
Dried Fruits of Australia. W. Eggleston	XVI	293	Past, President and Future of the Peace. W. D. Albright	XVI	127
Eastern Arctic Patrol, The Annual. D. L. McKeand	XVII	37	Patterson, E. K. Saving the World's Rarest Animal	XVII	41
Eggleston, W. Dried Fruits of Australia	XVI	293	Peace, Past, Present and Future of. W. D. Albright	XVI	127
Ehrhardt, Alfred. Tidal Effects upon the Ocean Floor	XVII	25	Perry, P. C. Trees and Hedges	XVI	299
Electrical Manufacturing Industry, Canada's. J. Fergus Grant	XVII	181	Petroleum Industry of Canada, The. Walter Francis	XVI	71
Elephant. See The Cheapest Tractor	XVII	142	Playgrounds of the Prairies. Robert J. C. Stead	XVI	55
Elliott, T. R. Fibres of Gold	XVI	109	Plommer, J. J. Tenquille Valley and Sun God Mountain	XVII	245
Ells, S. C. Our Heritage	XVI	1	Porsild, Dr. Morten P. See Science in the Shadow of the Pole	XVI	139
England, The Tithe Barns of. J. D. U. Ward	XVII	209	Prince Edward Island. Frank Walker	XVI	255
Falconer, Sir Robert, A. Canadian Universities	XVII	295	Rasmussen, C. and A. Gilbert Hale, Norway	XVII	313
Falkland Islands, The. "J.C."	XVII	147	Rattlesnakes in Alberta. Loris S. Russell	XVI	33
			Recent Developments in the Use of Cold Storage in Ontario. E. H. Darling	XVII	122
			Russell, Loris, S. Rattlesnakes in Alberta	XVI	33

INDEX VOLUMES XVI AND XVII, 1938

	Volume	Page		Volume	Page
Saguenay. Marius Barbeau.....	XVI	285	Tenquille Valley and Sun God Mountain. J. J. Plommer.....	XVII	245
Saving the World's Rarest Animal. E. K. Patterson.....	XVII	41	Tidal Effects Upon the Ocean Floor. Alfred Ehrhardt.....	XVII	25
Science in the Shadow of the Pole. William Q. Ketchum.....	XVI	139	Tithe Barns of England. The. J. D. U. Ward.....	XVII	209
Seven Mountains. The. Stewart MacNutt.....	XVI	43	Trees and Hedges. P. C. Perry.....	XVI	299
Ship Canals of Europe. H. E. M. Kensit.....	XVI	143	Universities, Canadian. Sir Robert A. Falconer.....	XVII	295
Smith, R. M. King's Highways of Ontario.....	XVI	159	Unlucky City, The (Guatemala). Irving Wallace.....	XVII	127
Snakes, Rattle, in Alberta. Loris S. Russell.....	XVI	33	Walker, Frank. Prince Edward Island.....	XVI	255
Some Aspects of Canadian Bird-Life. Hoyes Lloyd.....	XVI	265	Wallace, Irving. The Unlucky City.....	XVII	127
Spectacular Frobisher Bay. Martin J. Buerger.....	XVII	3	Ward J. D. U. The Tithe Barns of England.....	XVII	209
Stead, Robert J. C. Playgrounds of the Prairies.....	XVI	53	Washburn, Bradford. Conquest of Mount Lucania.....	XVII	165
Steel Industry of Canada. The. Desmond Killikelly.....	XVI	213	Water Ousel. The. Child of the Mountains. Harriet Geithmann.....	XVII	241
Story of Canadian Art. Donald W. Buchanan.....	XVII	273	Wheeler, R. L. and M. B. Davis. The Apple Industry of Canada.....	XVII	104
Sun God Mountain and Tenquille Valley. J. J. Plommer.....	XVII	245	Wilson, Clifford. Letters from George Back.....	XVII	131
Taverner, P. A. Adventures in Bird Photography.....	XVI	265	Wings over Redberry Lake. W. W. Coleman.....	XVII	93
			Zischka, A. E. The Cheapest Tractor.....	XVII	142

The Spirit of India, by W. J. GRANT, (London: Batsford, 1938, 10/6). In this deeply thoughtful and moving book, we are given a picture of India largely as it appears to its inhabitants rather than as seen by Western standards. "During the twelve odd years I have spent in the East", the author writes, "I have never ceased to be enchanted, not alone by her differences from the West but also by the golden splendour of her spirit. India indeed has a preciousness which a materialistic age is in danger of missing. Some day the fragrance of her thought will win the hearts of men".

The religious philosophy of the country is interpreted with an insight and understanding. Customs and social organizations that seem to our western minds fantastic and contrary to all ideas of progress are shown to have their roots deep in the actual needs of the people and their conception of the permanent values of life. Mr. Grant is a firm believer in the caste system which he says is "richly invaded by common sense. It has regulated Hindu India for centuries and made of her people a clean and sanctified race . . . No other system could have kept such a vast territory in unity".

His descriptions of the principal Indian cities are vivid and delightful. A critical appreciation of their diverse characteristics and the beauty of their architecture is expressed in vigorous prose with humour and many unusual metaphors. "New Delhi has no heart, all it has is an official brain". Old Delhi in contrast he regards "not so much a city as an experience." It would be difficult to find a more exquisite description of the Taj Mahal. It ends thus, "Agra . . . has stretched forth its hand for beauty . . . in the Taj Mahal it has come as near to the realization of a heavenly ideal in an earthly form as is possible for the imperfect powers of men."

There are illuminating chapters on village problems, education, agriculture, Mahatma Gandhi, the new constitution, the chief religions and philosophies of India and a very fair discussion of the effects of British rule in India. The book is illustrated magnificently, as are all Batsford publications, by a series of photographic reproductions which richly supplement the author's brilliant interpretation of the Spirit of India.

In spite of the floods of eloquence poured out in school and college debates on that hardy perennial "Oriental Immigration", how many of us could formulate an unprejudiced opinion on the question to-day? Very welcome, then, will be the comprehensive study just issued by the Toronto University Press entitled, *The Japanese Canadians*, by CHARLES H. YOUNG and HELEN R. Y. REID, C.B.E. Both authors are eminently qualified for their arduous task. Mr. Young, since his graduation from McGill, has been engaged in studies on the foreign populations of Western Canada, and Dr. Reid, also of McGill, is known for her outstanding work in the sphere of social service in Canada. Their book presents an impartial, sympathetic and fully documentary account of their investigations into the problem of the Oriental in British Columbia, which has become more and more the problem of the Japanese-Canadians, the second generation born in Canada but without the rights of Canadian citizens. It is very important that all thoughtful Canadians should know the history of Japanese immigration, the difficulties of assimilation and settlement, the cleavage between the older generation, whose roots are in Japan, and the new, who have become increasingly Canadian in education and outlook. A sustained study of the findings of the two investigators and other relevant material, official and unofficial, with interesting case histories and a due proportion of statistics, has been ably edited by Dr. H. A. Innis.

The second part of the book is by Professor W. A. Carrothers, formerly on the staff of two of our western universities and author of a number of important works. It is a careful study of Oriental Standards of Living, the crucial point in the antagonism between the white population and the Oriental settlers.

The book is a revelation of the immense difficulty of the problem, and offers valuable suggestions which may and should contribute towards its solution. The price is \$2.25.

D. A. NICHOLS

BLISTER RUST CONTROL AT VALCARTIER

Under the direction of the Forest Service of the Department of Mines and Resources, Ottawa, measures for the control of white pine blister rust were initiated last summer in a fine young plantation of red and white pine, growing on a part of the extensive sand plains of the Dominion Forest Experiment Station at Valcartier, P.Q. White pine in the plantation, which was set out in 1933-34 and 1935, number about 300,000, and the young trees are growing rapidly, many of them having attained a height of three feet.

White pine blister rust is a fungous disease, probably of Asiatic origin, which was brought into Canada from Europe about 1907 on imported white pine nursery stock. It is caused by a fungus which passes part of its life cycle in the bark of the white pine tree, and part on the leaves of the gooseberry and currant bush. The fungus enters a pine tree by way of the needles and from there moves downwards into the bark. For about three years after the tree has become infected there is no conspicuous evidence of the disease but after that time the affected part of the limb swells and the edges of the diseased area assume a characteristic dull yellowish green to orange colour. During May and June conspicuous orange-yellow blisters break through the bark. When mature, the blisters burst and the spores or "seeds" are carried by the wind to the gooseberry and currant bushes, where the second stage of their life is passed. Consequently, if no gooseberry and currant bushes are permitted to grow within a mile of the pine forest, the spread of the blister rust is prevented due to the lack of intermediary host plants necessary for the completion of its life cycle.

In order to safeguard the young white pine in the Valcartier area a project was started last August to eradicate all currant and gooseberry bushes within the region. This process known as the "Initial Control Treatment" has been found from data based on years of experience in the United States to be practicable, efficient and inexpensive. When the project, which will require about three years, is completed the Forest Service is confident no further loss from blister rust need be feared at Valcartier Forest Experiment Station.



Kindly mention CANADIAN GEOGRAPHICAL JOURNAL when replying to Advertisements



Accent on the

LAST WORD IN MIAMI BEACH

Each year discriminating Canadians are coming to Miami Beach in increasing numbers for their vacations—to a really different scene whose unique character repays them bountifully for only a few more miles of travel. And they are finding the Pancoast ideal because its exclusive seaside location, its private bathing beach and cabanas all provide the essential accent on "the last word in Miami Beach." Traditional superiority in matters of appointments, cuisine and service—acknowledged social and resort leadership—an established clientele among America's best people who come here year after year—these are the additional factors that make Pancoast vacations so entirely correct.

Pancoast clientele is carefully restricted—catering to the people you, yourself, would naturally choose as companions for the gay pastimes of sun, surf and sand which fill your hours in Miami Beach. Particularly during mid-winter reservations are essential. Please write or wire as far in advance as convenient.

The **PANCOAST**

Arthur Pancoast
President
Norman Pancoast
Manager

☆ OPEN ALL YEAR
American Plan in Winter



— men and women policyholders
who share in economic security, through
LIFE INSURANCE, by mutual co-operation with —



RECORD NICKEL PRODUCTION

Nickel production in Canada during 1937 established an all-time high record, when the output from all sources and in all forms totalled 224,905,046 pounds valued at \$59,507,176. This was an increase of 32.5 per cent in quantity and 34.6 per cent in value over 1936. Canada's exports of nickel in 1937 amounted to 222,770,000 pounds valued at \$58,913,217 compared with 173,637,500 pounds valued at \$44,594,296 in 1936.

Canada produces about ninety per cent of the world's supply of nickel, practically all of it coming from the Sudbury district of Ontario. The nickel bearing deposits of the Sudbury area also contains relatively high values in copper and platinum metals and the recoveries of these metals in 1937 were also the greatest ever realized in the history of the Canadian nickel-copper mining industry. In addition to the production of nickel, copper and the platinum metals there is an increasing output from these ores of the associated metals—silver, gold, selenium and tellurium. Sulphuric acid is also being made from sulphur in the waste smelter gases. The total gross value of the various products of the Canadian nickel-copper industry, considered as a whole, was estimated at \$111,353,066 in 1937 compared with \$77,593,731 in the preceding year.

Two companies operate both mines and metallurgical plants in the Sudbury area. The International Nickel Company of Canada, Limited, conducts smelting operations at Copper Cliff and Coniston, Ontario, while the Falconbridge Nickel Mines, Limited, smelt their ores at the Falconbridge mine located a few miles east of the town of

Sudbury. This last named company treat their matte in a refinery located at Kristiansand, Norway. Smelter matte made by the International Nickel Company is treated in plants located at Clydach, Wales; Huntington, West Virginia; and at Port Colborne and Copper Cliff, Ontario.

BUFFALO AND ELK GO "DOWN UNDER"

Donated to the Wellington Zoological Gardens, Wellington, New Zealand, by the Canadian Government through the National Parks Bureau of the Department of Mines and Resources, Ottawa, a shipment from Elk Island National Park in Alberta, consisting of one pair of buffalo and one pair of elk, is now on its way "down under".

Following their capture by park wardens the animals were subjected to medical inspection and given a clean bill of health. Special crates were prepared for the buffalo and elk and they were shipped by rail from Lamont, Alberta, to Vancouver, B.C., accompanied by an attendant and sufficient food for the train journey. From Vancouver they sailed on the M. S. *Hauraki* for New Zealand on November 24, and will be fed and tended by a member of the ship's crew during the three-week ocean voyage.

Canada's success in preserving the buffalo and elk is a notable example of the value of timely conservation. Once in danger of extinction, both of these species are now so numerous in the park areas of Western Canada that periodic reductions are necessary to prevent over-crowding and over-grazing.



"My Never-failing Friends..."

(Robert Southey, 1774)

Like an affectionate handclasp and a cheery smile, "Black & White" conveys its loyal friendship in a manner unsurpassed. For this grand old whisky gets its fine character from the richest reserves of aged whisky in Scotland. As a Christmas gift or for Yuletide entertaining "Black & White" is always right.



"BLACK & WHITE"

SCOTCH WHISKY

James Buchanan & Co. Limited, Glasgow and London

DISTILLED, BLENDED AND BOTTLED IN SCOTLAND

DIRECT MOTOR ROUTE

One of the most spectacular travel routes available to motorists in Canada is that linking the Prairies with the Pacific. Passing through the very heart of the Rockies this road traverses the great mountain play-grounds of Banff and Yoho National Parks, providing access to such famous beauty spots as Banff, Lake Louise, Moraine Lake and the Valley of the Ten Peaks, Emerald Lake, and the Yoho Valley.

This direct route from Winnipeg to Vancouver forms the western half of the Trans-Canada Highway and is continuous except for a portion of the road from Golden, B.C., to Revelstoke, B.C. Pending completion of this stretch, known as the "Big Bend" highway, motor tourists may bridge the gap by shipping their automobiles by rail.

Motoring in the Rockies provides one of the unforgettable thrills of a vacation spent in Canada, and offers splendid opportunities to become acquainted with Nature in her most magnificent setting. Motorists who visit the National Parks of the Rockies for the first time are agreeably surprised at the extent and excellence of the well-graded standard highways, all of which are kept in the best of condition during the touring season. In selecting the routes for highways the needs of the tourist and motorist have been considered so as to ensure easy gradients, safety, and outstanding views along the way. With the exception of Glacier National Park on the summit of the Selkirk range in southeastern British Columbia, reached only by rail, all National Parks are accessible by motor car.

Kindly mention CANADIAN GEOGRAPHICAL JOURNAL when replying to Advertisements X11

HUDSON'S BAY
Point
BLANKETS

The Perfect Gift



Hudson's Bay Company.
INCORPORATED 2ND MAY 1870.



Christmas...
Cards

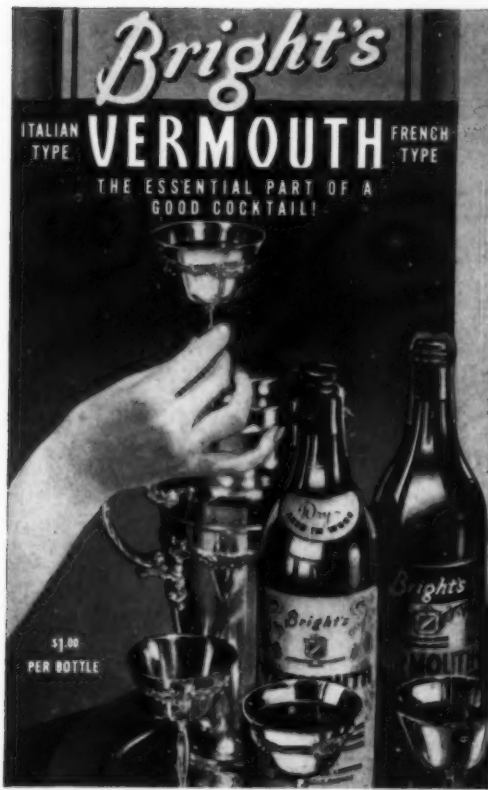
★ All the varied and vital charm of the Canadian scene comes to you with **Christmas** cards of the Canadian Artists Series.

They offer you beautiful full colour reproductions of significant paintings by Canada's great artists, cards you will be proud to send.

See them at your favorite store. ★ ★ ★ ★ Originated and produced by

ROUS AND MANN LIMITED

172 SIMCOE STREET TORONTO, Ontario.



A Longines Watch • The Gift Supreme!

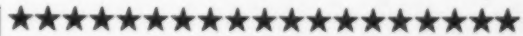
SOME ONE-DEAR TO YOU
-is hoping for a
LONGINES WATCH
this Christmas

Perhaps it's young Harry who wants to sport a Longines, the watch so intimately connected with aviation—or May, who is aching for a watch she can feel really proud of—or Dad, who perhaps is hankering after a newer, smarter model—or Mother, or Aunt... You'll find it easy to choose Longines Watches. Any good jeweller will be pleased to show you a selection of the latest Longines models, at prices running up from \$35.00 for men's pocket watches, \$42.50 for men's wrist and \$45.00 for ladies' wrist models. Illustrated are:

A1, LADIES' CORONATION, 14 K. solid white gold case, set with 20 diamonds, \$135.00; B53, MARY DODGE, 18 K. gold filled, 17 jewels, \$57.50; and A9, MEN'S STRAP GOLD MEDAL, 10 K. gold filled case, 17 jewels, \$55.00.

Longines has a companion line, the Wittnauer, selling up from \$25.00.

LONGINES
 THE WORLD'S MOST HONORED WATCH



**It's as
easy as this!**

When you arrive at New York's Grand Central Terminal, simply hand your bags to a porter and say "Hotel Roosevelt"... He will escort you through our private passageway, direct from the Terminal to the Roosevelt lobby—where we will do the rest... Perfect convenience... Quality meals... Thoughtful service... And room comfort that you'll boast of back home—from \$5.

Mr. Charles H. Sendey, formerly of Canada, is now Canadian Resident Manager of the Roosevelt. He will give personal attention to all Canadian guests.

**HOTEL
ROOSEVELT**

BERNAM G. HINES, Managing Director
 MADISON AVE. AT 45th ST., NEW YORK
 Direct Entrance to Grand Central Terminal

ONLY 20 MINUTES BY EXPRESS SUBWAY TO THE WORLD'S FAIR



Kindly mention CANADIAN GEOGRAPHICAL JOURNAL when replying to Advertisements XIV

FISH for the BIG ONES



*or just laze
on the beach*

Revel in the sun, the breeze, the coral beaches, the feathery palms of Nassau, where it is always June. Swim, sail, golf, play tennis, ride, dance, go to the races — every minute's a joy. Fine hotels, private cottages. Fast steamer and air service. Easy to get to Nassau!

*For information consult
your Travel Agent or
write to*

The Development Board

NASSAU

In the BAHAMAS



CANADIAN ARTISTS SERIES

By ALBERT H. ROBSON

Charming, colourful and inexpensive gift books. Each book contains a brief biography of the artist and many reproductions of his paintings in full colour. Titles available are: Tom Thomson, J. E. H. MacDonald, Cornelius Krieghoff, Clarence Gagnon, Paul Kane, A.Y. Jackson. Cloth, \$1.00 each; paper, 50 cents each.

THE RYERSON PRESS - TORONTO



That speaks volumes.

Dealers wanted in territories where we have not already representation

Canadian Distributors:

Photographic Stores Limited
65 Sparks Street, Ottawa, Ontario

Everything in Printing

FROM THE IDEA
TO THE
FINISHED JOB

Canadian Printing and Lithographing Co. is completely equipped to prepare and produce all classes of printing, including Magazines, House Organs, Calendars, Catalogues, Broadsides, Booklets, Folders, and Leaflets.

**CANADIAN PRINTING
and LITHOGRAPHING
COMPANY LIMITED**

2151 Ontario St. East, Montreal
Telephone FR. 2111



ENGRAVERS and PRINTERS

— of —

Bank Notes - Bonds - Stock Certificates
Letters of Credit, etc.

Corporation, Bank and Commercial
forms of every description.

CANADIAN BANK NOTE COMPANY LIMITED

Head Office: 224 Wellington St., Ottawa, Ont.

Branches: MONTREAL and TORONTO

CARL ZEISS
JENA

Featherweight BINOCULARS



DELTRINTEM -- the model illustrated, gives you a field of view of 450 ft. at a distance of 1000 yds; weight 14 ozs; Twin eyepiece focussing. Other ZEISS precision-made field glasses, equipped with wider angle vision, specially adapted for night, marine and other specialized work. Priced from \$52 to \$170.

See your nearest Dealer or
write for illustrated leaflet.

D-M

Canadian Distributors

HUGHES OWENS CO. LIMITED

Montreal, Toronto, Ottawa, Winnipeg



MACDONALD'S

"EXPORT"

WITH MOISTUREPROOF PAPER

EXPORT A

Filter-tip cigarettes

FOR THROAT PROTECTION

“Bristol”

ENGINES

CREATE NEW DISTANCE RECORD



POWERED with Bristol Pegasus engines, three Vickers Wellesley aeroplanes of the Royal Air Force captured for Great Britain the long-distance non-stop record on a flight from Ismailia, Egypt, to Darwin, Australia. The trio easily surpassed the existing distance record, credited to the Soviet Union for a flight of 6,306 miles from Moscow to California by way of the polar regions. One of the aircraft flew 6,600 miles to Kupang, where she refuelled and continued, while the other two reached their destination on November 7, having flown 7,162 miles in 48 hours 5 minutes. The previous record was shattered by no less than 856 miles.

The Pegasus XXII medium supercharged engine was selected for this flight, being notably economical in fuel consumption for such a high performance motor, developing as it does over a thousand horsepower for take-off. It is believed to be the lightest high power aero engine in full production in the world; its weight representing only 1.02 pounds per horsepower.

The London Times said: "Of the Pegasus engines, too, their makers may be justly proud. If one of them had run continuously for 48 hours on such a flight they might have been gratified. That three should go on doing their duty until the switches were cut off must establish this mark of the Pegasus, fed by 100-octane fuel, as one of the finest aero engines in the world".

"Bristol" radial air-cooled aero engines have once again proved their supremacy for high performance, lightness, low specific fuel consumption and absolute reliability over long periods of running.

BRISTOL AEROPLANE ENGINES

Represented in Canada by

BRITISH AEROPLANE ENGINES LIMITED

248 McCord Street Montreal

This Christmas
Give a Membership
in
The Canadian Geographical Society



● A GIFT MEMBERSHIP in your Society suggests the ideal solution to the problem of what to give at Christmas to friends at home and abroad. It saves time, worry and expense, and wins real appreciation.

● A GIFT MEMBERSHIP brings with it twelve monthly issues of the CANADIAN GEOGRAPHICAL JOURNAL with its wealth of interesting, instructive articles and vivid illustrations. Each month a new issue will serve as a timely remembrance of your good wishes.

● TO ADULTS the JOURNAL will have a special appeal, as it interprets in authentic and popular form the geography, resources and peoples of Canada. In addition each number has at least one outstanding article on the British Empire or other parts of the world in which Canada has particular interest.

● TO CHILDREN the JOURNAL will not only be fascinating but will prove of real educational value.

● A GREETING CARD specially designed for the Society will be sent to the recipient with your name inscribed as donor of the Membership, expressing your good wishes for Christmas and the New Year.

An application form is enclosed in this issue of the JOURNAL for your convenience in presenting Gift Memberships. Simply fill it in and return with your remittance to the Society.

To ensure that Greeting Cards and first copies of the JOURNAL are received by Christmas, send your application NOW to—

The Canadian Geographical Society

172 WELLINGTON STREET

OTTAWA, CANADA



*Your one earthly glimpse
of heaven will be Bali.*

Cruise to **PORTS OF PEACE** *on the* **Empress of Britain**

EIGHTH ANNUAL

**127-DAY WORLD CRUISE
FROM NEW YORK, JANUARY 7, 1939**

- Madeira
- Gibraltar
- Algiers
- Monaco
- Naples
- Athens
- Beirut
(Damascus,
Baalbek)
- Port Said
(Calro,
Luxor,
Thebes,
Karnak)
- Bombay
(Delhi,
Agra)
- Colombo
- Penang
- Singapore
- Bangkok
- Hong Kong
- Manila
- Bali
- Batavia
- Durban
- Cape Town
- St. Helena
- Rio de
Janelro
- Bahia
- Trinidad
- Havana

Visit five continents, twenty-three countries while you enjoy your private apartment aboard the largest world cruise ship, the EMPRESS OF BRITAIN, with her tennis and squash courts, her swimming pools and her every facility to make this the world's greatest travel system.

BOOK NOW!

Fares from \$2300 which include shore excursions.

For further information apply to your local travel agent or nearest Canadian Pacific agent.

Canadian Pacific

Always Carry Canadian Pacific Express
Travellers' Cheques . . . Good the
World Over.

